

ARCS

Remedial Planning Activities
at Selected Uncontrolled
Hazardous Substance Disposal
Sites in Region I



Environmental Protection Agency
Region I

ARCS Work Assignment No. 08-1JZZ

Capital City Press
Berlin, VT
VTD980915227
TDD# 9107-06-ATS

Site Inspection
Final Report

February 1993

TRC
Companies, Inc.

TAMS Consultants, Inc.
PEI Associates, Inc.
Jordan Communications, Inc.

SITE INSPECTION
CAPITAL CITY PRESS
BERLIN, VT

VTD980915227

FINAL REPORT

Prepared for

U.S. ENVIRONMENTAL PROTECTION AGENCY
Region I
90 Canal Street
Boston, Massachusetts 02203-2211

Work Assignment No.:	08-1JZZ
EPA Region:	I
Contract No.:	68-W9-0033 (ARCS)
TRCC Document No.:	A92-1589
TRCC Project No.:	1-636-009-0-1J38
TDD No.:	9107-06-ATS
TRCC Work Assignment Manager:	Diane Stallings
TRCC Task Manager:	Erik Bankey
Telephone No.:	(508) 970-5600
EPA Work Assignment Manager:	Sharon Hayes
Telephone No.:	(617) 573-5709
Date Prepared:	February 9, 1993

TRC COMPANIES, INC.
Boott Mills South
Foot of John Street
Lowell, MA 01852
(508) 970-5600

TABLE OF CONTENTS

Section	Page
INTRODUCTION	1
SITE DESCRIPTION	1
SITE ACTIVITY/HISTORY	5
ENVIRONMENTAL SETTING	12
RESULTS	18
SUMMARY	29
REFERENCES	32

Appendices	Page
A Analytical Results of Wastewater	A-1
B Analytical Results of Aqueous Samples	B-1
C Analytical Results of Samples	C-1
D Analytical Results of Soil Samples	D-1
E Analytical Results Ground Water, Soil, and Sediment Samples	E-1

TABLES

Number	Page
1 Source Evaluation	3
2 Hazardous Waste Quantity	11
3 Public Water Supply Wells Within 4 Miles of CCP	14
4 Private Well Users Within 4 Miles of CCP	15
5 Estimated Population Within Four Miles of CCP	17
6 Analysis of Private Wells in the Vicinity of Capital City Press	20
7 VTDEC Metals Soil Sample Results - 1984	21
8 Wurth VOC Soil Sample Results - 1984	22
9 Wurth VOC Aqueous Sample Results - 1984	22
10 Sample Summary	24
11 Sample Results Summary - Capital City Press	26

TABLE OF CONTENTS (CONTINUED)

FIGURES

Number		Page
1	Location Map	2
2	Site Sketch	4

INTRODUCTION

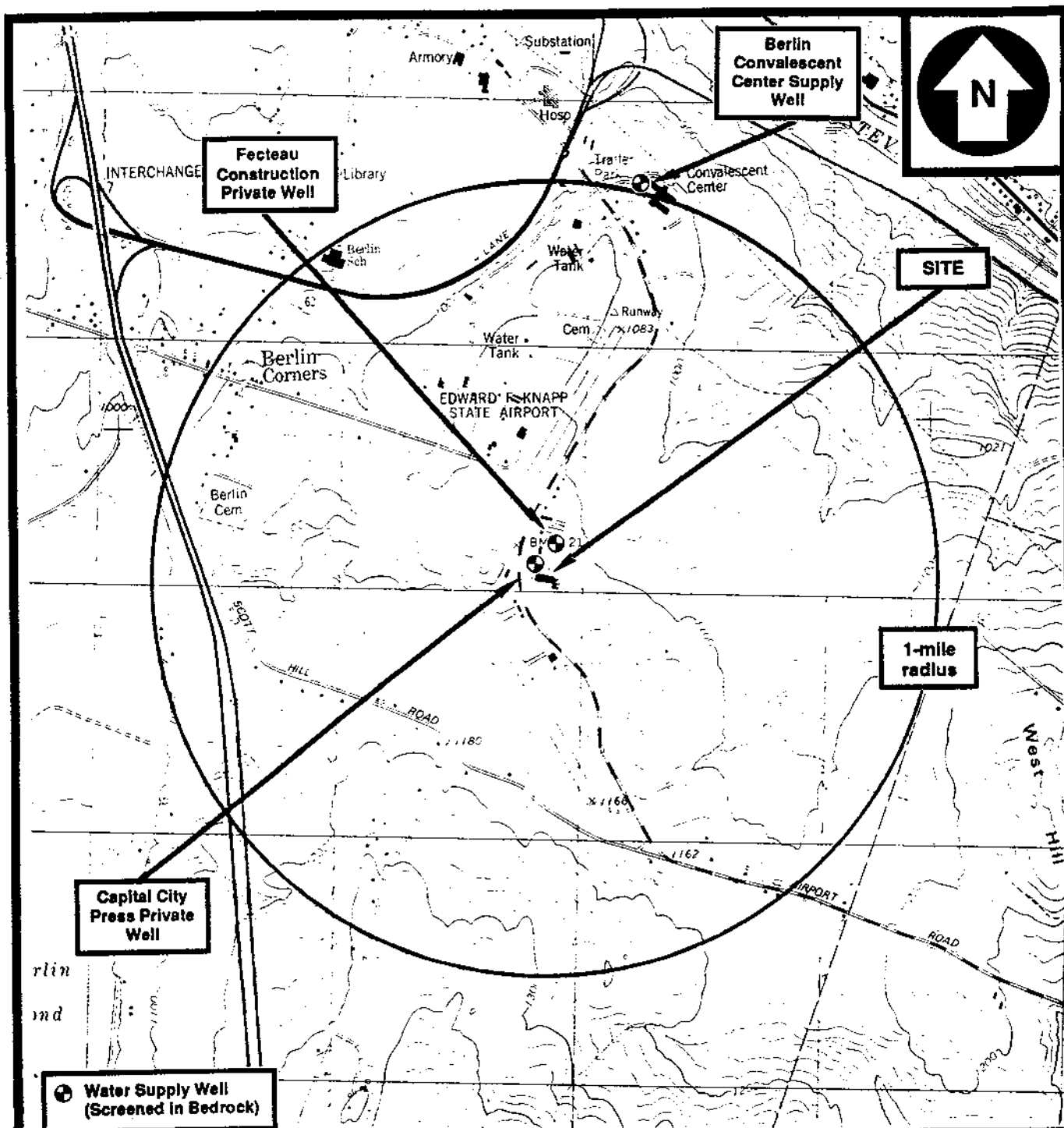
TRC Companies (TRCC) Inc. was contracted by the Region I U.S. Environmental Protection Agency (EPA) Waste Management Division to perform a Site Inspection of the Capital City Press property in Berlin, Vermont. All tasks were conducted in accordance with Work Assignment Number 08-1JZZ under EPA Contract Number 68-W9-0033. The Vermont Department of Environmental Conservation (VTDEC), under contract to the EPA completed a Preliminary Assessment (PA) of this site in January 1991 (VTDEC, 1991a). On the basis of information provided in the PA, a Site Inspection was initiated.

Background information used in the generation of this report was obtained through file searches conducted at EPA, and the VTDEC and Town Offices. Information was also collected during TRCC's site reconnaissance conducted on June 18, 1992, and environmental sampling on August 6, 1992.

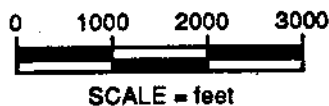
This report follows guidelines developed under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, commonly referred to as Superfund. However, this report does not necessarily fulfill the requirements of other EPA regulations such as those under the Resource Conservation and Recovery Act (RCRA) or other federal, state, or local regulations. Site Inspections are intended to provide a preliminary screening of sites to facilitate EPA's assignment of site priorities. They are limited efforts and are not intended to supersede more detailed investigations.

SITE DESCRIPTION

Capital City Press (CCP) is located in the town of Berlin, Washington County, Vermont (Figure 1) at 44° 12' 09.5" north latitude and 72° 33' 40.7" west longitude, at an approximate elevation of 1138 feet above mean sea level (VTDEC, 1991a). The site is bounded on the north, south, and west by Knapp Airport, Airport Road, and residential/commercial establishments, respectively. CCP is bounded on the east by open fields.



BASE MAP IS A PORTION OF THE FOLLOWING USGS 7.5' SERIES QUADRANGLE:
 BARRE WEST, VT, 1978; PHOTOREVISED 1988



QUADRANGLE LOCATION

LOCATION MAP

**CAPITAL CITY PRESS
 BERLIN, VERMONT**

TRC Companies, Inc.

Figure 1.

Information regarding current site conditions was obtained by TRCC during the site reconnaissance conducted on June 18, 1992. All printing and binding operations and offices are housed in one single-story building situated near the eastern edge of the CCP property (Figure 2) (Bankey, 1992a).

An asphalt driveway and large gravel parking area are located on the southern side of the CCP building, and a grass-covered parking area is located southeast of the gravel parking lot. Both lots are utilized for employee parking. A Fire Pond and a drainage swale are located north of the CCP building. The northeastern and southeastern walls of the CCP building are built on a steep slope that grades to the northeast and southeast. The west side of the CCP property is landscaped with grass and trees (Bankey, 1992a).

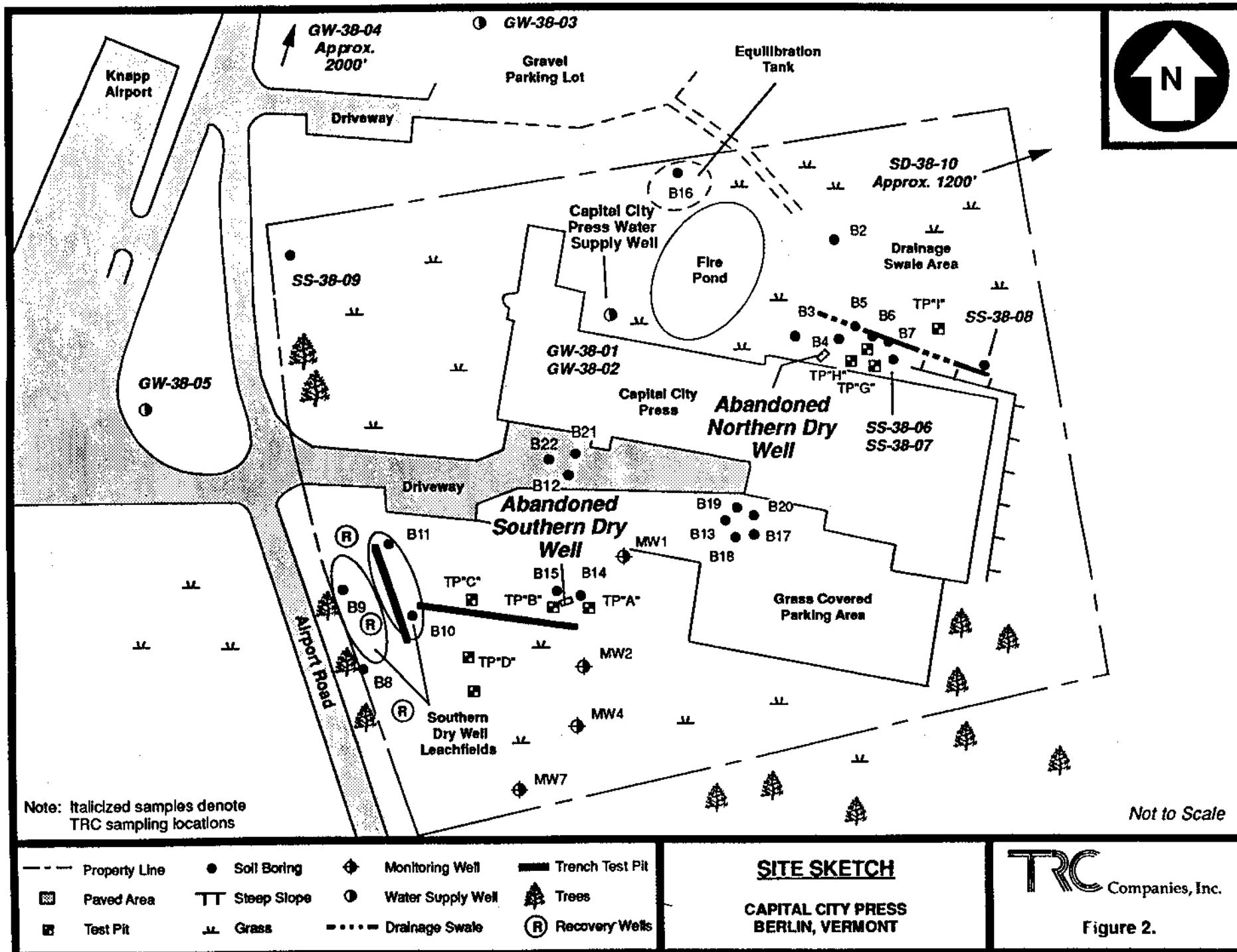
The CCP property is bisected by a topographic drainage divide. The northern and eastern sides of the property slope to the northeast. The rest of the property slopes moderately to the west, toward Airport Road (Bankey, 1992a).

No fences or other barriers to vehicular or pedestrian access were observed by TRCC during the reconnaissance. The nearest residence is located approximately 1000 feet northeast of CCP (Bankey, 1992a).

Table 1 presents all identified structures or areas on the CCP property that are potential sources of contamination, the containment features associated with each source, and the relative location of each source.

TABLE 1. SOURCE EVALUATION		
Potential Source Area	Containment Factors	Spatial Location
Northern Dry Well	None. Last used in 1984.	On the north side of the CCP building
Southern Dry Well	None. Last used in 1984.	On the south side of the CCP building

Sources: VTDEC, 1991a; Johnson, 1991; Bankey, 1992a.



Within the town of Berlin there are seven Resource Conservation and Recovery Act (RCRA) Notifiers, and no sites, other than CCP, listed in the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) (USEPA, 1992a, 1992b).

SITE ACTIVITY/HISTORY

Capital City Press has been in operation since 1908, and has been at its current location since 1967. Prior to the construction of the CCP facility, the land was an open field used for agricultural purposes (VTDEC, 1991a; Johnson, 1991).

CCP has engaged in printing and binding throughout its history on the site. Activities performed at this facility include film processing, plate processing, and the use of printing presses. Designs are produced through a cut-and-paste process, and are then photographed. Negatives are used to impart an image on aluminum plates treated with photosensitive chemicals. The plates are chemically etched and are then inked and used to print the image on paper. Hazardous wastes are generated from the washing of ink rollers and trays, and from waste etching solutions (VTDEC, 1989; Johnson, 1991).

Hazardous wastes are generated in the Composition Room, the Prep Room, and from the presses. Chemicals used in these processes include the following (Johnson, 1991):

- **Composition Room** - sodium dichromate, sulfuric acid, sodium hydroxide, and sodium bisulfate.
- **Prep Room** - hydroquinone, sodium bisulfate, sodium formaldehyde bisulfate, diethanolamine, acetic acid, sodium dichromate, sulfuric acid, aliphatic alcohol, aliphatic ketone solvents, aliphatic solvents, chromium, and organic acids.
- **Presses** - acidic water solution with inorganic salts of chromium, ammonium, bichromate, and various solvents including: tetrachloroethane, alcohols, hydrocarbons, and stoddard solvents (stoddard solvents include a wide range of petroleum distillates).

From 1967 until 1984, CCP discharged approximately 44,000 gallons per month of industrial and sanitary wastewater into separate, onsite, subsurface disposal systems, located on the

north and south sides of the CCP building. Industrial wastewater accounted for approximately 50% of the wastewater discharge. The flow rate of liquid industrial wastes to the onsite disposal systems was estimated to be approximately 800 gallons per day (VTDEC, 1983d, 1991a; Johnson, 1991).

The wastewater disposal systems consisted of (Johnson, 1991):

- Southern Dry Well- a 1,000-gallon septic tank dry well and leachfield, located on the southern side of the CCP building (Figure 2).
- Northern Dry Well- a 600-gallon pre-cast concrete tank dry well, located on the north side of the CCP building (Figure 2). This dry well was not connected to a leachfield.
- Separate septic tanks and leachfields, used for disposal of sanitary sewage, located on the south and northeast sides of the CCP building.

No information is available regarding the quantity or composition of the wastewater discharged into each dry well, however, it appears that both industrial and sanitary wastewaters were discharged into the northern and southern dry wells. The VTDEC reported that, in September 1983, a septage hauler removed 2,000 gallons of septage per week from the northern and southern dry wells (VTDEC, 1983b; Johnson, 1991).

In August 1983, a complaint was filed with the VTDEC over a failed subsurface disposal system at Capital City Press. In response to this complaint, VTDEC personnel collected a grab sample of CCP's photographic wastewater. Analysis revealed the presence of volatile organic compounds (VOCs) and heavy metals. VOCs detected included benzene, toluene, ethylbenzene, and xylene. Metals detected included silver and chromium (VTDEC, 1983a, 1991a). Based on these results, CCP was notified by VTDEC that its wastewater would have to be listed as a hazardous waste for continued subsurface disposal. Prior to 1983, the CCP industrial wastewater did not meet Vermont's definition of hazardous (VTDEC, 1983a, 1991a).

On September 13, 1983, VTDEC personnel sampled the southern (1,000 gallon) and northern (600 gallon) industrial dry wells. Samples were collected from the top (liquid) and bottom (sludge) of the southern dry well and the bottom (sludge) of the northern dry well.

Approximately 12 inches of black sludge was present at the bottom of both dry wells. Analysis of the samples revealed that the wastes in the dry wells contained elevated concentrations of VOCs and metals (VTDEC, 1983d). Leachate was also observed seeping into a drainage swale near the northern dry well. The effluent was black with a strong odor, and was noted draining off the property via a drainage swale located along the northeastern property boundary (VTDEC, 1991a).

On September 30, 1983, VTDEC conducted confirmation sampling at CCP. Samples were collected from the top and bottom of the southern and northern dry wells, and also from the drainage swale and a pond approximately 1200 feet northeast of CCP. Analysis of the samples confirmed high levels of VOC's in both dry wells. The dry well samples were not analyzed for silver or chromium. Constituents detected in the drainageway sample include toluene, ethylbenzene, xylene, trihalomethanes, chloroform, silver, and chromium. The only constituents detected in the pond sample were silver and chromium (VTDEC, 1983b, 1989a).

In October 1983, CCP was notified that the wastes sampled met the definition of a hazardous waste and could not be disposed offsite or sent to a municipal sewage treatment plant without a reduction in contaminants (VTDEC, 1983b, 1991a).

Wastes from the CCP Composition Room and Prep Room fixing presses were sent to a silver recovery system which had a reported removal efficiency of 90 - 100%. Prior to December 1983, when the wastewater treatment system was installed at CCP, the silver recovery unit discharged to a drain leading to the northern dry well. Zinc and potassium are also waste products of the printing operations at CCP (Johnson, 1991). In December 1983, wastestream samples from a 40 gallon settling tank in the Prep department inside the CCP facility, were collected and analyzed. The average concentrations of toluene and benzene detected were 58.7 µg/l and 103.6 µg/l respectively. The allowable discharge levels were 15 µg/l for benzene and 340 µg/l for toluene. CCP was ordered to reduce the levels of VOCs and

chromium in the wastewater if was to be disposed in their onsite dry wells (VTDEC, 1983e, 1991a).

In January 1984, the dry wells were pumped out, and the pipes leading from the CCP facility to the dry wells were rinsed and cleaned. The waste sludge was drummed and shipped to Ohio for incineration and to New York for disposal in a secure landfill (VTDEC, 1983e, 1991a).

In February 1984, Capital City Press's consultant, Spectrum Research submitted a soil sampling and analysis plan. This sampling plan was submitted in response to a request from the VTDEC to sample soils adjacent to the northern dry well, and the southern dry well and its leachfields (VTDEC, 1983f; Johnson, 1991). Upon review, the VTDEC, commented that this plan was inadequate and in need of revisions (VTDEC, 1984a, 1984f). An acceptable soil sampling and analysis plan was completed on March 2, 1984 (VTDEC, 1991a). VTDEC and Spectrum collected samples from the southern and northern dry wells on March 13, 1984. Samples analyzed by the VTDEC Water Resources Lab contained elevated levels of VOCs and chromium (VTDEC, 1984b). Samples analyzed by Spectrum revealed consistently lower levels of VOCs and chromium, possibly due to filtering samples (VTDEC, 1984c).

CCP maintained they were no longer discharging wastes containing toluene, benzene, perchloroethylene, or chromium, and that the presence of the contaminants may be due in part to "residues of accumulated sludge deposits in the existing pipes and rock bottom dry wells from previously used products over the past 10 to 15 years". Re-sampling of the Western Processor occurred in April 1984, and results again revealed the presence of VOCs and chromium (VTDEC, 1991a; Wurth, 1984).

Between April 27, and June 2, 1984, soil test pits were dug and soil samples collected by the VTDEC and CCP's consultant, Michael Wurth, in accordance with the soil sampling and analysis plan. A series of test pits were excavated around the northern and southern dry wells, and a trench was dug along the industrial leachfield on the south side of the CCP building. Soil samples were collected from the test pits and trench as well as from the

drainageway near the northern dry well. Samples of the seep near the northern dry well and standing water from a small pool in an adjoining field were also collected (Wurth, 1984; VTDEC, 1991a).

Based on the analytical results of the soil samples collected between April 27, and June 2, 1984, the VTDEC determined the majority of the material present in the soil was biodegradable, and that the levels of chromium and silver were low. Recommended actions included installation of three or four recovery wells and possibly using the north dry well as a recovery well (VTDEC, 1984e).

On May 3, 1984, VTDEC issued a Notice of Violation (NOV) of the Vermont Hazardous Waste Management Regulations to CCP. They were deemed to be in violation of Section 6-6603 (no certification for discharge) and, under Section 6-612 (monitoring, sampling, studies), were required to conduct soil and ground water investigations in the vicinity of the dry wells and leachfields. Corrective actions required to bring Capital City Press into compliance included, but were not limited to: diverting all waste streams to a lined holding pond with the wastes being disposed of at a municipal wastewater treatment facility; reduction of the wastewater stream from 1,600 gpd to 700 gpd; replacement of the Western Processor with an Enco processor that produces no liquid wastes; and the cessation of industrial waste discharge to the dry wells and leachfields (VTDEC, 1984d).

By May 18, 1984, CCP had reduced the amount of waste discharged to 700 gpd; had constructed a lined holding pond for their industrial wastewater; had replaced their Western Processor; and were seeking permission to dispose of their accumulated industrial wastes at a municipal wastewater treatment facility. To provide additional industrial wastewater storage capacity, a 2,000 gallon septic tank was installed in June 1984 (VTDEC, 1991a).

During July and August 1984, approximately 14,364 gallons of wastewater were transported to the Montpelier Wastewater Treatment facility for disposal. During this time, CCP discharged approximately 200-300 gpd of industrial wastewater to the lined ponds. By the end of December 1984, CCP's industrial wastewater storage capacity had increased to four

temporary vinyl-lined ponds and the 2,000 gallon septic tank. Wastewater stored on site totaled approximately 26,000 gallons. In April 1985, CCP began discharging industrial wastewater to the Montpelier Wastewater Treatment facility, via the municipal sewer system. The wastewater stored onsite was also disposed of at the Montpelier Wastewater Treatment facility in April 1983 (VTDEC, 1991a).

In October 1984, a remedial action plan was developed that included the installation of three recovery wells along the southern dry well leachline and the use of the northern dry well as a recovery well. The plan stipulated that the wells would be pumped in April 1985, and any liquid removed would be manifested as a hazardous waste. The wells would be checked again in November 1985 and pumped if necessary. Thereafter, the wells would be checked in April and November for the next two years and any liquid present would be removed and manifested as hazardous waste (Johnson, 1984).

The three recovery wells were installed in January 1985. When inspected in April 1985, two of the recovery wells along the leachline were noted to be dry. Approximately seven drums of contaminated liquid were removed from the remaining well and the northern dry well. When the wells were inspected in November 1985, all were dry with the exception of the northern dry well, which contained "negligible" amounts of waste. No information was located by TRCC in the VTDEC files regarding follow-up inspections (VTDEC, 1989a).

In August 1987, CCP contracted The Johnson Company to conduct an environmental site assessment of the CCP site. Johnson dug test pits, and collected and analyzed 26 soil samples for VOCs and heavy metals (Johnson, 1991).

In 1988, the VTDEC received a request from Johnson requesting that remedial action be declared complete. The letter stated that each time the recovery wells were checked, they were dry, and that any ground water found in the northern dry well appeared to be clean. No information was located in the available files indicating concurrence with this request (Johnson, 1988; VTDEC, 1991a).

Between January 1974 and February 1988, the VTDEC analyzed drinking water samples from seven private wells in the vicinity of CCP for VOCs. VOCs were detected at concentrations above current federal maximum contaminant levels (MCLs) in all but the most recent sampling event, in February 1988 (VTDEC, 1989a).

CCP has been discharging industrial wastewater to the Montpelier wastewater facility since April 1985. The facility is permitted to discharge up to 17,000 gallons per day, but is currently discharging approximately 2,000 gallons per day. This effluent is tested regularly by the VTDEC for metals (VTDEC, 1991a).

Table 2 summarizes the types of potentially hazardous substances which may have been disposed, used, or stored on the CCP property.

TABLE 2. HAZARDOUS WASTE QUANTITY		
Substance	Quantity or Volume/Area	Years of Use/Storage
Printing and Binding Wastewater Containing VOCs and Metals	22,000 gal/mo	1967 - 1984

Sources: VTDEC, 1983d; Bankey, 1992b.

The following list provides a chronological summary of previous work conducted at the site:

- August 1983; VTDEC personnel obtained a grab sample of Capital City Press photographic wastewater in response to a complaint (VTDEC, 1983a).
- September 13, 1983; VTDEC personnel sampled the southern and northern dry wells. Samples were collected from the top (liquid) and bottom (sludge) of the southern dry well and the bottom (sludge) of the northern dry well (VTDEC, 1983d).
- September 30, 1983; VTDEC conducted confirmation sampling from the dry wells. Samples were also collected of the seepage from a nearby pond (VTDEC, 1983b).

- October 4, 1983; Spectrum Laboratories investigated and analyzed the same sample locations as previous two events (Johnson, 1991).
- December 1983; the VTDEC collected and analyzed wastestream samples from a 40-gallon settling tank in the Prep department at CCP (VTDEC, 1983c, 1983e).
- April 30-May 1, 1984; a soil sampling program was conducted by Mike Wurth, Consulting Geologist for CCP (Wurth, 1984; Johnson, 1991).
- January, 1985; three recovery wells were installed along the southern dry well leachline. Two of the three recovery wells along the leachline were dry. Approximately seven drums of contaminated liquid were removed from the remaining well and northern dry well (VTDEC, 1991a; Bankey, 1992a).
- Six RCRA inspections were conducted by VTDEC between 1986 and 1991 (VTDEC 1986, 1987, 1988, 1989, 1991b).
- August 14, 1987; CCP contracted The Johnson Company to conduct a limited test pit soil sampling field investigation (Johnson, 1991).
- January 1991; VTDEC, under contract to the USEPA, completed a Preliminary Assessment of the CCP property (VTDEC, 1991a).

TRCC conducted a reconnaissance of the property on June 18, 1992, and collected five ground water samples, four soil samples, and one sediment sample on August 6, 1992 (Bankey, 1992a).

ENVIRONMENTAL SETTING

The Capital City Press property is located on Airport Road across from Knapp Airport in Berlin, Vermont. Berlin is primarily rural and agricultural, however, the area in the vicinity of CCP is zoned as light industrial (VTDEC, 1991a).

Geologically, Berlin lies in the New England Uplands Province of the Vermont Piedmont. The New England Uplands Province contain rocks that are highly metamorphosed and have been folded, faulted, and fractured. Bedrock underlying the site is the Barton River Member of the Waitsfield Formation. The Barton River member consists of interbedded siliceous

crystalline limestone and sericite-quartz-chlorite phyllite that is highly fractured and susceptible to chemical weathering and erosion (VT Geol, 1961).

The site is underlain by deposits of unstratified glacial drift having a low ground water potential. Wells in this type of surficial material typically yield enough water for domestic or light industrial use. The surficial materials on the site are mapped as glacial till. Glaciolacustrine littoral sediments, pluvial, and glaciofluvial kame moraines have also been mapped in the area (VTDEC, 1991a).

Soils mapped on the site include Fullam silt-loam with 3-8% slopes and Bartlett-Trow complex with 3-8% slopes. The Fullam series soils are found on footslopes of knolls and on till plains and consist of moderately deep to dense basal till, that are moderately well drained, and have an average depth to bedrock in excess of 60 inches. The Bartlett-Trow complex soils are on the summits and shoulders with the Trow soils on the shoulders and backslopes (VTDEC, 1991a).

Bartlett soils, are shallow, somewhat excessively drained silt loam soils. Bedrock is at an average depth of 17 inches. The Trow series soils are moderately deep, well drained soils that were formed in loamy glacial till. These soils are a fine to very fine sandy loam soils with an average depth to bedrock of approximately 30 inches. (VTDEC, 1991a). The bedrock was noted as being exposed at the ground surface on the south side of the CCP building (Bankey, 1992a).

Five public water systems, listed in Table 3, draw water from wells located within four miles of the site (Bankey, 1992c; 1992d). The Weston's Trailer Park well has a Well Head Protection Area (WHPA) or Aquifer Protection Area (APA) delineated. The other four public water systems have 3000 foot interim WHPAs/APAs designated (VTDEC, 1991a). Capital City Press is not located within an interim WHPA/APA. The closest public water system (Berlin Convalescent Home) is located approximately 1.1 miles north-northeast of CCP. Approximately 492 people consume water drawn from public wells within four miles of the CCP property (Bankey, 1992c, 1992d; VTDEC, 1991a).

TABLE 3. PUBLIC WATER SUPPLY WELLS WITHIN 4 MILES OF CCP				
Distance/Direction from Property	Source Name	Location of Source	Approximate Population Served	Source Type
1.1 mi. NNE	Berlin Convalescent Center	Berlin, VT	147	3 BR Wells,
1.7 mi. NE	RMC Mobile Home Park	Berlin, VT	69	1 BR Well
2.1 mi. SE	Birchwood Park Water System	Berlin, VT	36	1 BR Well
2.2 mi. NNE	Berlin Mobile Home Park	Berlin, VT	70	1 BR Well
3.2-3.4 mi. NNW	Weston's Trailer Park	Berlin, VT	170	1 BR Well 3 OB Wells
TOTAL			492	

Sources: VTDEC, 1991a; Bankey, 1992c, 1992d.

BR - bedrock

OB - overburden

The majority of Berlin residents rely on private wells or springs for drinking water. The Ground Water Management Section (GWMS) of the VTDEC has required that all wells be registered through submittal of Well Completion Reports (WCRs) (VTDEC, 1991a). As of June 18, 1992, a total of 495 WCRs were on file for the town of Berlin. Approximately 75 private wells are located within one mile of the CCP site, with 17 of those being within one-half mile of the site. The remaining population not served by public or private wells within four miles of the site consume water drawn from outside of the site's four mile radius (Bankey, 1992c, 1992d, VTDEC, 1991a).

Capital City Press has a private well, which is completed in bedrock to a depth of 400 feet below ground surface (BGS), that supplies process water for the facility and drinking water for 340 employees (Bankey, 1992e). Three other private wells are located in the vicinity of CCP. These wells are located on the following properties.

- Fecteau Construction Company is adjacent to the north of the CCP property. This well serves 48 employees (Bankey, 1992f).
- Knapp Airport is located on the opposite (west) side of Airport Road from CCP. Their well serves an estimated 20 people per day (Bankey, 1992g).
- E.H. Prescott, Inc. is located approximately 2000 feet north of the CCP property, and serves six employees (Bankey, 1992h).

Available well data in the vicinity of the CCP property indicate that wells are completed in bedrock that is composed of shale, slate, or limestone. Reported yields range from 1.5 to 60 gpm with total depths ranging from 190 feet to 325 feet BGS. Ground water movement in this type of bedrock is governed by fractures in the bedrock (VTDEC, 1991a; Bankey, 1992c).

The number of private well users, including the 340 employees at CCP, are summarized in Table 4.

TABLE 4. PRIVATE WELL USERS WITHIN 4 MILES OF CCP	
Radial Distance from CCP (miles)	Approximate Population Served by Private Wells
onsite (workers)	340
0.00 - 0.25	89*
0.25 - 0.50	18
0.50 - 1.00	149
1.00 - 2.00	694
2.00 - 3.00	643
3.00 - 4.00	445
TOTAL	2,378

Sources: VTDEC, 1991a; Phelps, 1992; Bankey, 1992c, 1992d.

*This total includes Fecteau Construction Company employees (48), E.H. Prescott, Inc. employees (6), and approximate number of employees and visitors using Knapp Airport water (20 per day).

The CCP property lies at an elevation of approximately 1140 feet above sea level (USGS, 1988). Surface water runoff flows offsite in two directions:

- Runoff from the western and southern sides of the property currently flow to the west into a drainage ditch along Airport Road, on the west side of the CCP property. Water in this drainage ditch flows into a drainage culvert and under Airport Road, into an unnamed intermittent stream on the west side of the runway, approximately 0.4 miles downstream of CCP (the drainage ditch and intermittent stream bed were both dry on the days of the site reconnaissance and environmental sampling). Water in the intermittent stream flows north-northwest approximately 1.3 miles where it empties into an unnamed perennial stream. The unnamed perennial stream flows approximately 2.3 miles north-northeast to where it empties into Stevens Branch (USGS, 1988; Bankey, 1992i).
- Surface water runoff from the northern and eastern section of the CCP property flows northeasterly into an unnamed pond, located approximately 1200 feet (0.2 miles) northeast of the site. The pond is emptied by an unnamed stream which drains into Stevens Branch approximately 1.3 miles northeast of the pond, 1.5 miles upstream from where the unnamed perennial stream, mentioned above, empties into Stevens Branch (USGS, 1988; Bankey, 1992i).

The two surface water pathways converge in Stevens Branch approximately 2.6 miles north of CCP. From that point, Stevens Branch flows north 0.5 miles and empties into the Winooski River, approximately 8.5 miles downstream of the site. Surface water continues to flow northwest in the Winooski River to the 15-mile downstream limit, near Middlesex, VT.

There are no surface water intakes used for drinking water within 15 miles downstream of the site (Bankey, 1992j). Precipitation, as measured at the Barre-Montpelier Airport (Knapp Airport) indicates an average annual precipitation of 33.94 inches. The mean annual lake evaporation is approximately 25 inches resulting in a net annual precipitation of 8.94 inches (VTDEC, 1991a).

There are approximately 10 acres of wetlands located within one-half mile of the site. These wetlands are primarily open water, forested, scrub/shrub or emergent subsystems (USDOI, 1977). Wetlands front almost the entire 15-mile downstream surface water pathway. There are approximately 27.4 miles total of wetland acreage along both sides of Stevens Branch and

the Winooski River, and are classified as upper perennial, open water, riverine wetlands. There are no wetlands along the initial 1.3 miles of surface water pathway (USDOL, 1977a, 1977b, 1977c; Bankey, 1992i).

The VT Department of Fish and Wildlife database lists the occurrence of a breeding colony of upland sandpipers, a State Threatened Species, in the meadows of Knapp Airport (within 0.5-1.0 miles of CCP), and the occurrence of a nesting site for the common loon, which is State Endangered, in Berlin Pond (1.0-2.0 miles from CCP), (VTF & WL, 1992).

Stevens Branch and the Winooski River support populations of rainbow and brown trout. The fish populations are limited because of urbanization and industry along both surface water bodies. Stevens Branch is impacted by sewage from the Town of Barre, effluent from storm drains and floor drains, and upstream erosion. The fish population of the Winooski River is generally greater upstream and downstream of the Town of Montpelier (Bankey, 1992k).

Approximately 13,536 people reside within four miles of the CCP property. This total includes 340 CCP employees. Table 5 lists the distribution of residents within four miles of the site, and the onsite workers. Population information was obtained through house counts and from census data (Bankey, 1992d).

TABLE 5. ESTIMATED POPULATION WITHIN FOUR MILES OF CCP	
Radial Distance from CCP (miles)	Approximate Population within Distance Ring
onsite (workers)	340
0.00 - 0.25	21
0.25 - 0.50	18
0.50 - 1.00	149
1.00 - 2.00	760
2.00 - 3.00	5,989
3.00 - 4.00	6,259
TOTAL POPULATION	13,536

Source: Bankey, 1992d.

RESULTS

In August 1983, VTDEC personnel obtained and analyzed a grab sample of CCP photographic wastewater in response to a complaint filed with the VTDEC over a failed subsurface disposal system at CCP. The wastewater was analyzed for silver and chromium, and for VOCs using EPA Method 602. The following concentrations of VOCs and heavy metals were detected (VTDEC, 1983a, 1991a):

- benzene - 1145.14 micrograms per liter ($\mu\text{g/l}$),
- toluene - 247.12 $\mu\text{g/l}$,
- ethylbenzene - 1307.84 $\mu\text{g/l}$,
- total xylenes - 5842.26 $\mu\text{g/l}$
- silver - 2.0 $\mu\text{g/l}$, and
- chromium - 11.0 $\mu\text{g/l}$.

On September 13, 1983, VTDEC collected samples from the top (liquid) and bottom (sludge) of the southern (1,000 gallon) industrial dry well, and from the bottom (sludge) of the north (600 gallon) industrial dry well. A summary of those results is presented below (VTDEC, 1991a):

Compound ($\mu\text{g/l}$)	1,000 Gallon Drywell (Sludge)	1,000 Gallon Drywell (Liquid)	600 Gallon Drywell (Sludge)
Benzene	3,877	1,720	28,045
Toluene	17,557	32,440	16,179
Ethylbenzene	3,942	280	29,089
Xylene	26,732	2,024	147,107
Silver	75	104	32
Chromium	11,500	513	62,700

VTDEC conducted confirmation sampling at CCP on September 30, 1983, from the top and bottom of the southern and northern dry wells. Analysis of the samples confirmed elevated levels of VOCs in both dry wells. The dry well samples were not analyzed for silver or

chromium (VTDEC, 1991a). Also on September 30, 1983, VTDEC collected and analyzed aqueous samples from the drainage swale near the northern dry well, and from seepage from a nearby pond. The samples were analyzed for silver and chromium, and for VOCs using EPA Method 602. The following VOCs and heavy metals were detected in the samples collected on September 30, 1983 (Johnson, 1991):

Compound (µg/l)	Drainage Swale	1,000 Gallon Drywell (Sludge)	1,000 Gallon Drywell (Liquid)	600 Gallon Drywell (Sludge)
Toluene	1,357	ND	ND	ND
Benzene	134	947	13,577	1,563
Ethylbenzene	352	ND	ND	ND
Total xylenes	1,276	1,655	9,159	4,411
Silver	184	NA	NA	NA
Chromium	610	NA	NA	NA
Chloroform	ND	15	ND	ND
Total Trihalomethanes	ND	15	ND	ND

NA - Not analyzed
ND - Not detected

The only constituents detected in the pond seepage sample were silver (5.0 µg/l) and chromium (3.0 µg/l) (VTDEC, 1983a, 1991a).

Ground water has historically been contaminated with VOCs in the vicinity of CCP. Drinking water samples collected from wells in the vicinity of CCP have in the past, contained concentrations of VOCs above current Federal MCLs. Results of the analyses for the CCP well and two private wells adjacent to the CCP property are listed in Table 6. VOCs were not detected in samples collected from these wells in February 1988 (VTDEC, 1989a).

Between April 27 and June 2, 1984, soil samples from test pits and trenches on the CCP property were collected by both the VTDEC and CCP's consultant, Michael Wurth. Aqueous samples were collected from a seep in the bank below the northern dry well and from a small

TABLE 6. ANALYSIS OF PRIVATE WELLS IN THE VICINITY OF CAPITAL CITY PRESS								
	1,1,1- Trichloroethane	1,1- Dichloroethane	Trichloroethylene	Methylene Chloride	Benzene	Toluene	Cyclopentane	Trichloroethene
MCL*	200	-- 5	5	5	5	1,000	--	
Capital City Press								
10-11/85	--	--	--	6.0	6.0	6.0	47	--
10/86	--	--	--	--	<1.0	1.0	--	--
2/88	--	--	--	--	--	--	--	--
E.J. Prescott								
1/84	7.0	2.0	--	--	--	--	--	--
2/84	6.0	2.0	2.0	--	--	--	--	--
10/86	156.0	--	--	--	6.0	4.0	--	28.0
2/88	---	--	--	--	--	--	--	--
Knapp Airport								
1/84	3.0	1.0	--	--	--	--	--	--
2/84	1.0	2.0	--	--	--	--	--	--
12/85	--	--	--	--	--	--	--	--
10/86	--	--	--	--	--	--	--	--
2/88	--	--	--	--	--	--	--	--

Results in µg/L

Source: VTDEC, 1989a (The laboratory reports for these analyses were not available)

*USEPA; Drinking Water Regulations and Health Advisories, April 1992.

-- Not Detected

ponded area in an adjoining field to the north of CCP (VTDEC, 1991a). The aqueous samples were analyzed by VTDEC for VOCs using Method 601 and 602 analysis. Constituents noted included toluene, detected at a concentration of 894 parts per billion (ppb) in the seep, and 4 ppb in the small ponded area. Silver concentrations in the soils ranged from 1.0 mg/kg in Test Pit B, near the southern drywell, 249 mg/kg in Test Pit C, near the old leachfield for the southern drywell. Chromium concentrations ranged from 4.3 mg/kg in Test Pit D, to 30.3 mg/kg in Test Pit C. The concentrations of metals detected in the soil samples collected by VTDEC are summarized in Table 7:

TABLE 7. VTDEC METALS SOIL SAMPLE RESULTS - 1984		
Location	Silver (mg/kg)	Chromium (mg/kg)
Test Pit A (South Drywell)	1.9	14.1
Test Pit B (South Drywell)	1.0	5.4
Test Pit C	249.0	30.3
Test Pit D (Leachline)	15.4	4.3
Test Pit D (Leachline)	16.1	26.8
Test Pit G (North Drywell)	5.4	19.2
Test Pit H (North Drywell)	12.4	20.4
Test Pit I (Drainageway)	3.8	11.8

Source: VTDEC, 1989a. (The laboratory reports for these analyses were not available).

Wurth analyzed the soil samples collected between April 27 and June 2, 1984 for VOCs. It is not stated in the Wurth report whether the samples were analyzed for metals. The specific method of VOC analysis used by the laboratory, is not given other than stating that "Standard Methods for Examination of Water and Wastewater" were used. VOCs detected in the soil samples are summarized in Table 8.

Wurth also collected and analyzed aqueous samples from the seep in the bank below the northern dry well and from a small pool in an adjoining field and detected elevated levels of acetone. As with the soils, no analytical results of metals are given, and the specific method of VOC analysis used is not stated. A summary of Wurth's analysis is listed in Table 9.

TABLE 8. WURTH VOC SOIL SAMPLE RESULTS - 1984			
Sample Location	Test Pit A	Test Pit H	Test Pit I
Compounds (ppb)			
Chloroform	2	ND	ND
Acetone	ND	23	ND
Methylene Chloride	ND	17	7
Perchloroethylene	ND	130	ND
Chlorobenzene	ND	3	ND

Sources: Wurth, 1984; VTDEC, 1989a

ND - Not Detected

ppb - parts per billion

TABLE 9. WURTH VOC AQUEOUS SAMPLE RESULTS - 1984					
Sample Location	Test Pit C	Test Pit D	Test Pit G	Seep	Small Pool
Compounds (ppb)					
Acetone	3200	130	1200	1500	900
Toluene	14	ND	48	894	ND
Methylene Chloride	ND	31	31	ND	26
Chloroform	ND	160	85	ND	ND
Perchloroethylene	ND	ND	15	ND	ND
Trichloroethane	ND	ND	ND	<25	ND
Carbon Disulfide	ND	ND	ND	730	ND
Ethyl Benzene	ND	ND	ND	21	ND
Xylene	ND	ND	37	85	ND

Sources: Wurth, 1984; VTDEC, 1989a

ppb - parts per billion

ND - Not Detected

The Johnson Company excavated test pits and collected and analyzed 26 soil samples for VOCs and heavy metals in August 1987 (Johnson, 1991). No VOCs were detected in the soils at CCP with the sole exception of acetone detected at 166 µg/l in sample location B7 (Figure 2), collected from the drainage swale on the northern side of the CCP property. The Johnson Company reported that the metals concentrations detected in the 26 soil samples were "due to natural causes." Barium, cadmium, lead, and nickel, four of the metals detected in the soils, were not detected in ground water samples collected from the CCP well (Johnson, 1991).

On August 6, 1992, TRCC collected ten environmental samples at, and in the vicinity of, the CCP site (Figures 1 and 2). Five ground water samples, four shallow soil samples, and one sediment sample were collected at or near CCP property. Table 10 summarizes the locations and times at which all samples were collected.

TRCC collected ground water samples from the onsite CCP private water supply well (which included a duplicate sample), and from three private water supply wells on properties adjacent to or near the CCP site including:

- Fecteau Construction Company private well, located north of the CCP property.
- Knapp Airport well, west of the CCP property, located on the west side of Airport Road.
- E. J. Prescott Well, located north of the Fecteau Construction Company property.

Street addresses are not assigned to the above listed properties.

TRCC collected four shallow soil samples on the CCP property, three from the drainage swale north of the CCP building and one from the northwest corner of the property. In addition, a sediment sample was collected from the unnamed pond located approximately 1200 feet northeast of the CCP facility. The soil samples consisted of brown to dark brown,

TABLE 10. SAMPLE SUMMARY Environmental Samples Collected by TRCC on August 6, 1992					
Sample Location Number	Traffic Report Number	Time Collected	Remarks	Sample Depth	Sample Source
GW-38-01	SA0269 SA0274 MAAR32	10:50	Grab	--	Ground water sample collected from CCP water supply well.
GW-38-02	SA0270 SA0275 MAAR33	10:50	Grab	--	Duplicate of GW-38-01.
GW-38-03	SA0271 SA0276 MAAR34	12:45	Grab	--	Ground water sample collected from Fecteau Construction Company private water supply well.
GW-38-04	SA0272 SA0277 MAAR35	11:50	Grab	--	Ground water sample collected from E. J. Prescott private water supply well.
GW-38-05	SA0273 SA0278 MAAR36	14:00	Grab	--	Ground water sample collected from Knapp Airport private water supply well.
SS-38-06	ADC09 MAAR37	15:45	Grab	0"-6"	Shallow soil sample collected from drainage swale area north of the CCP building.
SS-38-07	ADC10 MAAR38	15:55	Grab	0"-6"	Duplicate of sample SS-38-06 for quality control.
SS-38-08	ADC11 MAAR39	15:25	Grab	0"-6"	Shallow soil sample collected from drainage swale area north of the CCP building.
SS-38-09	ADC12 MAAR40	16:20	Grab	0"-6"	Shallow soil sample collected from the northwest corner of the property.
SD-38-10	ADC12 MAAR41	14:45	Grab	0"-6"	Sediment from south side of unnamed pond approximately 1200 feet northeast of the CCP building
RB-38-11	ADC14 MAAR42	10:15	Grab	--	Soil/sediment sampling equipment rinsate blank.

fine sand and silt, with some roots. The sediment sample consisted of a dark brown to dark gray silt, with some organic material (Bankey, 1992a).

All ground water samples from the private water supply sources were analyzed through the Contract Laboratory Program, Special Analytical Services (SAS) for VOCs by EPA Method 524.2; semi-volatile organic compounds, pesticides, and polychlorinated biphenyls (PCBs) by

Superfund Analytical Methods for Low Concentration Water Organic Analysis 6/91; and low concentration Target Analyte List (TAL) metals, and cyanide, under SAS Case Number 6702HQ/18550.

All soil and sediment samples were analyzed through the Contract Laboratory Program for full Target Compound List (TCL) VOCs, semi-volatile organic compounds (SVOCs), which include base, neutral, and acid extractable compounds (BNAs), pesticides, and polychlorinated biphenyls (PCBs), TAL metals, and cyanide, under RAS Case Number 18552.

All ground water samples were obtained by filling sample containers directly from the tap, no sampling equipment was needed. Soil samples were collected using dedicated stainless steel sampling equipment (i.e., trowels, spoons, bowls, etc.)(Bankey, 1992a).

Problems were identified during data validation resulting in estimated data ("J" and "UJ" qualifiers) and rejected data ("R" qualifier). A total of 18 SAS VOC sample quantitation limits were rejected due to response factor values being less than the 0.10 minimum response factor value limit. This included the rejection of quantitation limits for acetone in three samples, 2-butanone in four samples, 4-methyl-2-pentanone in one sample, and 2-hexanone and 1,2-dibromo-3-chlorophane in all five ground water samples. Five thallium detection limits were rejected due to a pre-digestion matrix spike recovery of less than 30%.

Table 11 is a summary of compounds and elements detected in samples collected by TRCC. Listing of a compound or element is based on its detection at a concentration which is at least three times greater than the concentration of the same compound or element in a reference sample. If the compound or element was not detected in the reference sample, the sample quantitation limit (SQL) or sample detection limit (SDL) is used as the reference value; the compound or element is listed on the table if its concentration is greater than or equal to the SQL/SDL.

For the purposes of this report, ground water sample GW-38-04, collected from the E. J. Prescott well, has been selected as a reference sample for the water matrix because it was

TABLE 11. SAMPLE RESULTS SUMMARY - CAPITAL CITY PRESS
Samples Collected by TRCC on August 6, 1992

Sample Location	Compound/Element	Sample Concentration	Reference Concentration
GW-38-01	Acetone	500J µg/l	50 µg/l (SQL)
	2-Butanone	6 µ/l	5 µg/l (SQL)
	Iron	320 µg/l	16.3 µg/l (SDL)
	Manganese	453 µg/l	1.3 µg/l (SDL)
	Zinc	106J µg/l	2.01J µg/l
GW-38-02	Acetone	1400J µg/l	100 µg/l (SQL)
	2-Butanone	6J µg/l	5 µg/l (SQL)
	Iron	272 µg/l	16.3 µg/l (SDL)
	Manganese	453 µg/l	1.3 µg/l (SDL)
	Zinc	171J µg/l	20.1J µg/l
GW-38-03	Trichloroethene	1 µg/l	1.0 µg/l (SQL)
	Manganese	149 µg/l	1.3 µg/l (SDL)
	Sodium	216,000 µg/l	51,000 µg/l
GW-38-05	Sodium	175,000 µg/l	51,000 µg/l
SS-38-06	Phenanthrene	16,000 µg/kg	160J µg/kg
	Fluoranthene	37,000 µg/kg	330J µg/kg
	Pyrene	22,000 µg/kg	340J µg/kg
	Benzo(a)anthracene	11,000 µg/kg	160J µg/kg
	Chrysene	14,000 µg/kg	160J µg/kg
	Benzo(b)fluoranthene	30,000 µg/kg	370J µg/kg
	Benzo(k)fluoranthene	30,000 µg/kg	370J µg/kg
	Benzo(a)pyrene	12,000 µg/kg	100J µg/kg
	Indeno (1,2,3-c,d)pyrene	9,500 µg/kg	180J µg/kg
	Benzo(g,h,i)perylene	8,900 µg/kg	130J µg/kg
	4,4'-DDE	7.8J µg/kg	4.6 µg/kg (SQL)
	Endosulfan sulfate	6.3J µg/kg	4.6 µg/kg (SQL)
	Methoxychlor	130 µg/kg	21.6 µg/kg (SQL)
	Lead	88.3 mg/kg	555 mg/kg (SDL)
	Potassium	5510 mg/kg	1.3 mg/kg (SDL)
	Silver	7.8 mg/kg	54.5 mg/kg (SDL)
	Zinc	487J mg/kg	0.76 mg/kg (SDL)
SD-38-10	Arsenic	2.0J mg/kg	0.80 mg/kg (SDL)
	Barium	19.8 mg/kg	1.49 mg/kg (SDL)
	Calcium	2370 mg/kg	5.01 mg/kg (SDL)
	Chromium	14.3 mg/kg	1.58 mg/kg (SDL)
	Cobalt	6.0 mg/kg	1.13 mg/kg (SDL)
	Iron	12,500 mg/kg	2.46 mg/kg (SDL)
	Magnesium	2150 mg/kg	12.96 mg/kg (SDL)
	Manganese	235 mg/kg	1.42 mg/kg (SDL)
	Nickel	11.0 mg/kg	1.26 mg/kg (SDL)
	Potassium	237 mg/kg	85.78 mg/kg (SDL)
	Selenium	1.8 mg/kg	1.20 mg/kg (SDL)
	Vanadium	12.0 mg/kg	0.78 mg/kg (SDL)
	Zinc	38.2J mg/kg	0.94 mg/kg (SDL)

TABLE 11. (CONTINUED)			
Sample Location	Compound/Element	Sample Concentration	Reference Concentration
SS-38-07	Phenanthrene	16,000 µg/kg	160J µg/kg
	Fluoranthene	36,000 µg/kg	330J µg/kg
	Pyrene	23,000 µg/kg	340J µg/kg
	Benzo(a)anthracene	13,000 µg/kg	160J µg/kg
	Chrysene	15,000 µg/kg	160J µg/kg
	Benzo(b)fluoranthene	31,000 µg/kg	370J µg/kg
	Benzo(k)fluoranthene	31,000 µg/kg	370J µg/kg
	Benzo(a)pyrene	13,000 µg/kg	100J µg/kg
	Indeno (1,2,3-cd)pyrene	9,700 µg/kg	180J µg/kg
	Benzo(g,h,i)perylene	8,800 µg/kg	130J µg/kg
	Endrin	5.8J µg/kg	4.8 µg/kg (SQL)
	Endosulfan sulfate	6.7J µg/kg	2.7J µg/kg
	Methoxychlor	170 µg/kg	25 µg/kg (SQL)
	Lead	87.0 mg/kg	21.6 mg/kg
	Potassium	4040 mg/kg	555 mg/kg
	Silver	7.6 mg/kg	1.3 mg/kg
	Zinc	381J mg/kg	54.5 mg/kg

Notes: µg/l - micrograms per liter
µg/kg - micrograms per kilogram
mg/kg - milligrams per kilogram
J - value is estimated due to limitations identified during data validation

approximately 2,000 feet north of CCP. The direction of ground water flow is unknown. Soil sample SS-38-09 was used as a reference soil sample because it was collected from an undisturbed location in the northwest corner of the CCP property, away from the former dry wells and leachfields. The analytical results for the sediment sample were compared with SQLs and SDLs because no upstream or reference samples could be collected.

Acetone, 2-butanone, and trichloroethene were detected in ground water samples collected from two private wells on and near the CCP property. Acetone and 2-butanone were detected at concentrations of 500 µg/l and 6 µg/l respectively in sample GW-38-01 collected from the CCP well; and at concentrations of 1400 µg/l and 6 µg/l respectively, in sample GW-38-02, a duplicate sample of GW-38-01. Trichloroethene was detected at a concentration of 1 µg/l in sample GW-38-03, collected from the Fecteau property well.

The three VOCs detected in ground water; acetone, 2-butanone, and trichloroethene, may be attributable to printing and binding processes at CCP. Although these chemicals were not specifically reported as being used in printing and binding operations at CCP, a wide range of solvents were used for cleaning in the Prep Room and Press Room, and acetone was detected in two samples of wastewater that were formerly discharged by the plant (CCP, 1984).

The chlorinated solvents detected in the three nearby private supply wells during the sampling conducted on February 28, 1984 by VTDEC, were not detected in the wells sampled by TRCC on August 6, 1992 (TRCC sampled two of the three same wells).

No SVOCs, pesticides, or PCB compounds were detected above reference values in the ground water samples collected on and adjacent to the CCP property.

Sodium was detected at concentrations above reference values in two ground water samples, and manganese in one ground water sample. The source of these inorganics compounds is unknown.

Fourteen SVOCs were detected above reference values in soil samples collected from the site. All SVOCs detected were in the duplicate samples (samples SS-38-06 and SS-38-07), near the former northern dry well. Ten of the SVOCs detected in the two samples were polycyclic aromatic hydrocarbons (PAHs). PAH concentrations ranged from 8,900 µg/kg (benzo[g,h,i]perylene) to 37,000 µg/kg (fluoranthene) in sample SS-38-06, and from 8,800 µg/kg (benzo[g,h,i]perylene) to 36,000 µg/kg (fluoranthene) in SS-38-07. Four pesticide compounds were also detected in the same samples at concentrations above SQLs. The source of these SVOCs is unknown.

In samples, SS-38-06 and-07, zinc, potassium, lead, and silver were detected at concentrations exceeding reference values. Potassium was detected at the highest concentrations (5,510 mg/kg and 4,040 mg/kg) in the respective samples.

Lead and chromium are used in the printing operations at CCP. Lead is a component of the

colored inks, and chromium wastes are generated in the process of cleaning the ink roller and trays. Silver, zinc, and potassium are also waste products of the printing operations at CCP (Johnson, 1991).

In sediment sample SD-38-10, collected from the unnamed pond approximately 1,200 feet north of the CCP building, 13 elements were detected above SDL reference concentrations. Concentrations ranged from 1.8 mg/kg (Selenium) to 12,500 mg/kg (Iron). The source of these inorganic elements is unknown.

SUMMARY

Capital City Press (CCP) is located in the town of Berlin, Vermont. CCP is a printing and binding company. During the late 1970s and early 1980s CCP discharged approximately 22,000 gallons per month of industrial wastewater into separate onsite subsurface disposal systems, located on the north and south sides of the CCP building. This wastewater contained concentrations of volatile organic compounds (VOCs) and metals in excess of current federal maximum contaminant levels.

In August 1983, a complaint was filed with the Vermont Department of Environmental Conservation (VTDEC) over a failed subsurface disposal system at CCP. In response to this complaint, VTDEC personnel collected a grab sample of CCP's photographic wastewater. Analysis revealed the presence of VOCs and metals.

On September 13, 1983, VTDEC personnel sampled the southern and northern industrial dry wells. Analysis of the samples revealed that the wastes in the dry wells had elevated concentrations of VOCs and metals. Capital City Press's consultant collected samples from the southern and northern dry wells, as well as from the Western Processor inside the CCP facility, confirming elevated levels of VOCs and chromium.

Between April 27, and June 2, 1984, soil test pits were dug and soil samples collected by the VTDEC and CCP's consultant. Based on results of analyses of these soil samples, it was determined the majority of the material present in the soil was biodegradable, and that the

levels of chromium and silver were low. Recommended actions included installation of three or four recovery wells and using the north dry well as a recovery well. In April of 1985, Capital City Press began discharging it's industrial wastewater to the Montpelier wastewater facility, via the sewer.

In August 1987, CCP contracted The Johnson Company to conduct an environmental site assessment of the CCP site. In 1988, Johnson requested that remedial action be declared complete.

During TRCC's field activities, five ground water, four soil, and one sediment samples were collected. Three VOCs, that may be attributable to printing and binding processes at CCP, were detected in the ground water above reference values at two sample locations. No SVOCs or metals that are directly attributable to operations at CCP were detected above reference values in the ground water.

In the soils, fourteen semivolatile organic compounds (SVOCs) were detected above reference values. Ten of the SVOCs were polycyclic aromatic hydrocarbons, and four were pesticides. The SVOCs detected in the soils are not directly attributable to operations at CCP.

At one soil sample location on the CCP property, four metals were detected above reference values. Thirteen metals exceeded reference values in a sediment sample collected from a pond located northeast of the CCP property. Lead, chromium, silver, zinc, and potassium, are used in printing and binding at CCP, and the higher levels of these metals may be attributable to operations at CCP.

Potential receptors of contamination from the Capital City Press property include the following:

- The 340 workers using the private water supply well located on the property;
- approximately 2,870 persons using public and private water supply wells within four miles of the property;

- fisheries and wetlands in the surface water pathway: the unnamed stream, Stevens Branch, and the Winooski River.

REFERENCES

Bankey (TRCC), 1992a, Field Logbook of Site Reconnaissance and Sampling, June 18, and August 6, 1992.

Bankey (TRCC), 1992b, Telecon with Chet Moulton, CCP Plant Manager, RE: Historical Wastewater Disposal at CCP, September 1, 1992.

Bankey (TRCC), 1992c, VTDEC Ground Water Management Section files, and Department of Water Resources files, Waterbury, VT, April 22, 1992.

Bankey (TRCC), 1992d, Project notes RE: Distance Ring Calculations, Capital City Press, June 30, 1992.

Bankey (TRCC), 1992e, Telecon with Seth Pitkin, Project Manager of Environmental Site Assessment of Capital City Press property for Johnson Company in November 1991, RE: Information on the Capital City Press Water Supply Well, May 14, 1992.

Bankey (TRCC), 1992f, Telecon with Vic Fecteau, RE: Number of Employees Using Water from the Fecteau Construction Company Private Well, July 8, 1992.

Bankey (TRCC), 1992g, Telecon with Joseph Landry, Vermont Air Transportation Department, RE: Number of People Using Water from Knapp Airport Private Well, July 8, 1992.

Bankey (TRCC), 1992h, Telecon with Mrs. Brown, E.J. Prescott, Inc., RE: Number of Employees Using Water from Private Well, August 3, 1992.

Bankey (TRCC), 1992i, Project notes for surface water flow and wetlands for Capital City Press, June, 1992.

Bankey (TRCC), 1992j, Telecon with Mike Young with the VTDEC, RE: Surface Water Intakes, September 18, 1992.

Bankey (TRCC), 1992k, Telecon with John Claussen, District Fisheries Biologist, Vermont Department of Fish and Wildlife, Agency of Natural Resources, RE: Fish in Stevens Branch and the Winooski River near CCP, September 21, 1992.

CCP, 1984. Spectrum Laboratory analysis of two wastewater samples from CCP, May 18, 1984.

EPA, 1992. Drinking Water Regulations and Health Advisories, Environmental Protection Agency, April, 1992.

Johnson, 1984. Letter from The Johnson Company to Cedric Sanborn, Department of Water Resources, VTDEC, RE: CCP Remedial Action Plan for Soils, November 16, 1984.

Johnson, 1988. Letter from The Johnson Company to Peter Reed, Hazardous Waste Management Section, VTDEC, RE: Request that CCP Remedial Action be Decared Complete, April 21, 1988.

Johnson, 1990. Letter from The Johnson Company to Eric Blatt, Regional Engineer, VTDEC, RE: Repair of CCP Water Supply Well, August 7, 1990.

Johnson, 1991. Environmental Site Assessment of Capital City Press, Conducted by The Johnson Company, Inc., November, 1991.

Phelps, 1991. Town of Barre, Vermont Water Supply Study, performed by Phelps Engineering, Middleboro, VT,

USDOI, 1977a. U.S. Department of Interior National Wetlands Inventory Map of Barre West, Vermont 7.5 Minute Series Quadrangle, October 1977.

USDOI, 1977b. U.S. Department of Interior National Wetlands Inventory Map of Montpelier, Vermont 7.5 Minute Series Quadrangle, October 1977.

USDOI, 1977c. U.S. Department of Interior National Wetlands Inventory Map of Middlesex, Vermont 7.5 Minute Series Quadrangle, October 1977.

USEPA, 1992a. U.S. Environmental Protection Agency, List of CERCLIS Sites in Vermont, July 13, 1992.

USEPA, 1992b. U.S. Environmental Protection Agency, 1991b, Hazardous Waste Data Management System (HWDMS), May 13, 1991.

USGS, 1988. U.S. Geological Survey, Barre West, Vermont, 7.5 Minute Series Topographic Map, 1978, photorevised 1988.

USGS, 1976. U.S. Geological Survey, Middlesex, Vermont, 7.5 Minute Series Topographic Map, 1968, photoinspected 1976.

USGS, 1968. U.S. Geological Survey, Montpelier, Vermont, 7.5 Minute Series Topographic Map, 1968.

VTDEC, 1983a. Letter from John Malter, Chief, Hazardous Materials Management Section, VTDEC, to Robert Carlson, Owner, Capital City Press, RE: Complaint Regarding Failure of Septic System, September 9, 1983.

VTDEC, 1983b. VTDEC Interagency Memorandum to the File from Gerald DiVincenzo and Stan Corneille with the Hazardous Materials Management Section, VTDEC, RE: Meeting with Capital City Press Management Concerning Hazardous Wastes Generated at CCP, October 5, 1983.

VTDEC, 1983c. VTDEC Laboratory Organic Chemical Analysis Report for Purgeable Aromatics by EPA Method 602, December 7, 1983.

VTDEC, 1983d. VTDEC Interagency Memorandum to the File from Gerald DiVincenzo and Stan Corneille with the Hazardous Materials Management Section, VTDEC, RE: Sampling of Capital City Press Wastestream, September 14, 1983.

VTDEC, 1983e. Letter from Stanley Corneille, Geologist, VTDEC, to James Parker, Owner, Capital City Press, RE: Collection of Samples from 40-Gallon Settling Tank, December 14, 1983.

VTDEC, 1983f. Internal memo from Cedric Sanborn and Stanley Corneille to VTDEC files, RE: Compliance Schedule at CCP, December 29, 1983.

VTDEC, 1984a. Letter from Cedric Sanborn, Hazardous Waste Permits Specialist, VTDEC, to Fred Kent, Spectrum Research, CCP Consultant, February 10, 1984.

VTDEC, 1984b. Letter from Cedric Sanborn, Hazardous Waste Permits Specialist, VTDEC, to Susan Brundrette, Spectrum Research, CCP Consultant, April 3, 1984.

VTDEC, 1984c. Letter to VTDEC Files from Cedric Sanborn, Hazardous Waste Permits Specialist, VTDEC, April 4, 1984.

VTDEC, 1984d. Letter from Richard Valentinette, Director, Air and Solid Waste Programs, VTDEC, to James Parker, President, CCP, RE: Notice of Violation of the Vermont Hazardous Waste Management Regulations, May 3, 1984.

VTDEC, 1984e. Letter to VTDEC Files from Cedric Sanborn, Hazardous Waste Permits Specialist, VTDEC, July 30, 1984.

VTDEC, 1984f. Letter from Stanley Corneille, Geologist, VTDEC, to Cedric Sanborn, VTDEC, RE: Comments on Spectrum Soil and Analysis Plan for CCP, February 9, 1984.

VTDEC, 1984g. Letter to VTDEC Files from Cedric Sanborn, Hazardous Waste Permits Specialist, VTDEC, RE: Drinking Water Analyses of Three Private Wells Near Capital City Press Property, January 16, 1984.

VTDEC, 1985a. Letter to VTDEC Files from Chris Stone, VTDEC, January 3, 1985.

VTDEC, 1985b. Letter from Stanley Corneille, Geologist, VTDEC, to Durward Lamb, Superintendent, Montpelier, Vermont City Water and Wastewater Department, RE: CCP Discharge of Wastewater to the Montpelier Wastewater Treatment Plant, February 6, 1985.

VTDEC, 1986. Vermont Department of Environmental Conservation RCRA inspection Trip Report for Capital City Press, January 31, 1986.

VTDEC, 1987. Vermont Department of Environmental Conservation RCRA inspection Trip Report for Capital City Press, July 1, 1987.

VTDEC, 1988. Vermont Department of Environmental Conservation RCRA inspection Report for Capital City Press, February 17, 1988.

VTDEC, 1989. Vermont Department of Environmental Conservation RCRA inspection Report for Capital City Press, March 23, 1989.

VTDEC, 1991a. Vermont Department of Environmental Conservation Preliminary Assessment of Capital City Press Report, January, 1991.

VTDEC, 1991b. Vermont Department of Environmental Conservation RCRA inspection Report for Capital City Press, May 6, 1991.

VTDOH, 1984. Vermont Department of Health Laboratory Analyses of the Knapp Airport well, New Hampshire Ins. Co. well, and E. J. Prescott Inc. well, February 28, 1984.

VTF & WL, 1992. Letter from Everett Marshall, Biologist/Data Manager, Department of Fish and Wildlife, Agency of Natural Resources, May 21, 1992.

VT Geol, 1961. Vermont Geological Survey, Vermont Development Department, Centennial Geologic Map of Vermont.

Wurth, 1984. Site and Soil Evaluation for Capital City Press in Berlin, Vermont, Conducted by Michael Wurth, Consulting Geologist, November, 1984.

APPENDIX A

ANALYTICAL RESULTS OF WASTEWATER
Collected by VTDEC Personnel at Capital City Press on
August 17, 1983

State of Vermont Environmental Conservation Laboratories
Organic Chemical Analysis Report for Purgeable Aromatics by
EPA Method 602*

Sample Identification: 109-83

Person Submitting Sample: J. Harshman

Sample Location: Pt. H. Wastewater

Address: VT AEC

Capital City Press

Air & Solid Waste - Hazardous Wastes

Purpose of Sample: Determine if

Telephone: 828-3395

organics getting into septic Sludge

Comments on Sample: test for

Date of Submission: 8/17/83

toluene, benzene, xylene

Time of Submission: 3:49

Sample Chlorinated Yes ☐ No ☒

DO NOT WRITE BELOW THIS LINE

Date of Lab Analysis: 8/18/83

Units of Results: ug/l or ppb

Analytical Procedure: Gas chromatography

Additional Comments: _____

Quality Control: Water blank spiked with

known conc of benzene, 1,3 dichloro
benzene and p xylene. RF
checked

Methods of Quantification: _____

External standard

The following priority pollutants were analysed for by gas chromatography.

(1) Benzene 1145.14 ug/l

P xylene = 214.39 ug/l

(2) Toluene 247.12 ug/l

m-xylene = 5627.87 ug/l

(3) Ethylbenzene 1307.87 ug/l

(4) Chlorobenzene _____

(5) 1,4 Dichlorobenzene _____

(6) 1,3 Dichlorobenzene _____

(7) 1,2 Dichlorobenzene _____

There were numerous large
peaks which could not all
be identified.

Completed Analysis Date: 8/19/83 yw

Signature: R. G. Gidley 8/22/83

ND= None Detected - K= Less Than - L= Greater Than

APPENDIX B

ANALYTICAL RESULTS OF AQUEOUS SAMPLES
Collected by VTDEC Personnel at Capital City Press on
September 30, 1983

State of Vermont Environmental Conservation Laboratories
Organic Chemical Analysis Report for Purgeable Aromatics by
EPA Method 602*

Sample Identification: 220-83

Sample Location: CP. Press

Person Submitting Sample: [Signature]

Address: Air/Solid Waste

Purpose of Sample: Failed Septic

System

Telephone: 3395

Date of Submission: 9/30/83

Comments on Sample: CC-4 - Dranage way

Time of Submission: 1.00 PM

Sample Chlorinated Yes No X

DO NOT WRITE BELOW THIS LINE

Date of Lab Analysis: 10/11/83

Units of Results: ug/l

Analytical Procedure: Gas chromatography

Additional Comments: Additional peaks were present which were not identified.

Quality Control: See 222-83

Methods of Quantification: External std.

The following priority pollutants were analysed for by gas chromatography.

(1) Benzene 134 ug/l

(2) Toluene 1357

(3) Ethylbenzene 352

(4) Chlorobenzene ND

(5) 1,4 Dichlorobenzene

(6) 1,3 Dichlorobenzene

(7) 1,2 Dichlorobenzene

p+m Xylene = 663 ug/l
o Xylene = 613

Completed Analysis Date: 10/12/83 Signature: Brenda Clarkson

ND= None Detected - K= Less Than - L= Greater Than

APPENDIX C

ANALYTICAL RESULTS OF SAMPLES
Collected by Wurth Personnel Capital City Press on
April 30, 1984

SPECTRUM

ENVIRONMENTAL RESEARCH
LABORATORIES, INC.

P. O. BOX 122
MONTPELIER, VERMONT 05602

Michael Wurth
(CCP consultant)
sample results

Report to:

Mr. James Parker
CapitalCity Press
Airport RD.
Berlin, Vt.

Sampled by: F.KENT/SPECTRUM & State

Date Received: 4/30/84

Date of Report: 5/29/84

These samples were analyzed according to "Standard Methods for Examination of Water and Wastewater", Latest Edition, APHA, AWWA, and WPCF.

GAS CHROMATOGRAPHIC/MASS SPECTROMETER SCANS WERE RUN ALL MEASURABLE PEAKS ARE IDENTIFIED

Sample #	Client Identification	Tests Performed	Results, mg/l
# 976	SITE D TRENCH	no major measurable peaks	quite clean
	Black soil		
#977	SITE G BLACK	methylene chloride	31.0 ppb
	LIQUID	acetone	1200.0 ppb
		chloroform	85.0 ppb
		perchloroethylene	15.0 ppb
		toluene	48.0 ppb
		xylene	37.0 ppb
# 978	SOIL Site G	clean, small amt. acetone	
#979	SITE H Soil	methylene chloride	17 ug/kg
		acetone	23 ug/kg
		perchloroethylene	130 ug/kg
		chlorobenzene	3.0 ug/kg
# 980	SITE I SOIL	quite clean	
		methylene chloride	7 ug/kg

Analyst J. L. 4

SPECTRUM

ENVIRONMENTAL RESEARCH
LABORATORIES, INC.

P. O. BOX 122
MONTPELIER, VERMONT 05602

Report to:

Mr. James Parker
Capital City Press
Airport Rd.
Berlin, VT.

Sampled by: F. KENT/SPECTRUM& State

Date Received: 4/27, 4/30/, 5/1/84

Date of Report: 5/29/84

These samples were analyzed according to "Standard Methods for Examination of Water and Wastewater", Latest Edition, APHA, AWWA, and WPCF.

GAS CHROMATOGRAPHIC/MASS SPECTROMETER SCANS WERE RUN ALL MEASURABLE PEAKS ARE IDENTIFIED

<u>Sample #</u>	<u>Client Identification</u>	<u>Tests Performed</u>	<u>Results, mg/l</u>
# 966	WATER IN ADJOINING	ACETONE	900 ppb
	FIELD 4/27	METHYLENE CHLORIDE	26.0 ppb
#967	OUTFALL FROM REAR	CARBON DISULFIDE	730 ppb
	SEPTIC TANK WHICH	TRICHLOROETHANE	less than 25 ppb
	PRODUCES TRICKLE	TOLUENE	690 ppb
	STREAM 4/27	ETHYL BENZENE	21.0 ppb
		XYLENE	85.0 ppb
#968	BLACK LIQUID IN	ACETONE	130 ppb
	TRENCH LOCATION D	METHYLENE CHLORIDE	31.0 ppb
	4/30	CHLOROFORM	160.0 ppb
#973	SITE #A SOIL	CHLOROFORM	2.0 ppb
# 974	SITE B SOIL	NO MAJOR MEASURABLE PEAKS QUITE CLEAN	
# 975	SITE C TRENCH	ACETONE	3200.0 ppb
	BLACK LIQUID	TOLUENE	14.0 ppb

Analyst _____

APPENDIX D

ANALYTICAL RESULTS OF SOIL SAMPLES
Collected by Johnson Personnel at Capital City Press on
August 1987

Environmental Site Assessment of Capital City Press

Berlin, Vermont

November 1991

Prepared for:

J.H. ACQUISITION, CORP.
209 Harbor Road
Shelburne, Vermont 05482

Prepared by:

THE JOHNSON COMPANY, INC.
5 State Street
Montpelier, Vermont
(802) 229-4600

Capital City Press
Laboratory Analytical Results (cont.)

Matrix: Soil

ALL RESULTS REPORTED IN PPB

SAMPLE LOCATION	DATE	TETRACHLORO- ETHYLENE	VOC's		1,1,1- TRICHLOROETHANE	1,2- DICHLOROETHANE	CARBON TETRACHLORIDE	METHYLENE CHLORIDE	1,1- DICHLOROETHANE
			ACETONE	METHYL ETHYL KETONE					
US EPA MCL***		5.000			200.000	5.000	5.000		
VT ANR GROUND WATER STANDARD**		.700		170.000	200.000	5.000	5.000	5.00	
VT DOH HEALTH ADVISORY LEVEL*		20.000			200.000	10.000	5.000	48.00	70.00
CC003A SOIL	4/30/84	ND			ND	ND	ND	ND	ND
CC004B SOIL	4/30/84	ND			ND	ND	ND	ND	ND
CC005B SOIL	4/30/84	ND			ND	ND	ND	ND	ND
CC006C SOIL	4/30/84	ND			ND	ND	ND	ND	ND
CC007 SOIL	4/30/84					ND	ND	ND	ND
CC008D SOIL	4/30/84	ND			ND	ND	ND	ND	ND
CC009D SOIL	4/30/84	ND			ND	ND	ND	ND	ND
CCP SITE D TRENCH	4/30/84								
CCP SITE G SOIL	4/30/84								
CCP SITE H SOIL	4/30/84	130.000	23.00					17.00	
CCP SITE I SOIL	4/30/84							7.00	
CC011 SOIL	5/01/84	ND			ND	ND	ND	ND	ND
CC012 SOIL	5/01/84	ND			ND	ND	ND	ND	ND
CC014 SOIL	5/01/84	ND			ND	ND	ND	ND	ND
CCP SITE A SOIL	5/01/84								
CCP SITE B SOIL	5/01/84								
CCP SOIL 017/018	5/08/84	ND			ND	ND	ND	ND	ND
CCP JC01 SOIL	8/14/87								
CCP JC05 SOIL	8/14/87								
B2/0-2	10/03/91	ND	ND	ND	ND	ND	ND	ND	ND
B3/0-2	10/03/91	ND	ND	ND	ND	ND	ND	ND	ND
B4/0-2	10/03/91	ND	ND	ND	ND	ND	ND	ND	ND
B5/0-2	10/03/91	ND	ND	ND	ND	ND	ND	ND	ND
B5/5-7	10/03/91	ND	ND	ND	ND	ND	ND	ND	ND
B6/0-2	10/03/91	ND	ND	ND	ND	ND	ND	ND	ND
B7/0-2	10/03/91	ND	166.00	ND	ND	ND	ND	ND	ND
B8/0-2	10/03/91	ND	ND	ND	ND	ND	ND	ND	ND
B8/5-7	10/03/91	ND	ND	ND	ND	ND	ND	ND	ND
B9/10	10/03/91	ND	ND	ND	ND	ND	ND	ND	ND

05/91

Capital City Press and Vicinity
Laboratory Analytical Results - Metals
Matrix: Soil

I:\projects\1-1012-1\soils.db

ALL RESULTS REPORTED IN PPB

SAMPLE LOCATION	MATRIX	SAMPLE DATE	LAB	LAB SAMPLE NUMBER	ANALYTICAL METHOD	ARSENIC	BARIUM	CADMIUM	CHROMIUM	COPPER	LEAD
EPA MCL***						50.000	200.00	5.00	100.00	1300.00	5.00 S
ANR GROUND WATER STANDARD**						50.000	1000.00	5.00	50.00	1000.00	20.00
DOH HEALTH ADVISORY LEVEL*											
003A SOIL	SOIL	4/30/84	DWR	01584					14100.00		
004B SOIL	SOIL	4/30/84	DWR	01585					5400.00		
005B SOIL	SOIL	4/30/84	DWR	01586					10300.00		
006C SOIL	SOIL	4/30/84	DWR	01587					30300.00		
007 SOIL	SOIL	4/30/84	DWR	01590					10100.00		
008D SOIL	SOIL	4/30/84	DWR	01588					4300.00		
009D SOIL	SOIL	4/30/84	DWR	01589					26800.00		
P SITE D TRENCH	SOIL	4/30/84	SPE	976						ND	
P SITE G SOIL	SOIL	4/30/84	SPE	978						ND	
P SITE H SOIL	SOIL	4/30/84	SPE	979						ND	
P SITE I SOIL	SOIL	4/30/84	SPE	980						ND	
011 SOIL	SOIL	5/01/84	DWR	01660					19200.00		
012 SOIL	SOIL	5/01/84	DWR	01661					20400.00		
014 SOIL	SOIL	5/01/84	DWR	01662					11800.00		
P SITE A SOIL	SOIL	5/01/84	SPE	973						ND	
P SITE B SOIL	SOIL	5/01/84	SPE	974						ND	
SOIL 017/013	SOIL	5/08/84	DWR	01955							
JC01 SOIL	SOIL	8/14/87	AQU								
JC05 SOIL	SOIL	8/14/87	AQU								
0-2	SOIL	10/03/91	SCI		TCLP	24.000	190.00	ND	ND		ND
0-2	SOIL	10/03/91	SCI		TCLP	10.000	400.00	ND	ND		140.00
0-2	SOIL	10/03/91	SCI		TCLP	ND	260.00	5.00	ND		ND
0-2	SOIL	10/03/91	SCI		TCLP	9.000	410.00	ND	ND		ND
5-7	SOIL	10/03/91	SCI		TCLP	ND	240.00	ND	ND		ND
0-2	SOIL	10/03/91	SCI		TCLP	11.000	330.00	9.00	ND		140.00
0-2	SOIL	10/03/91	SCI		TCLP	14.000	300.00	ND	ND		ND
0-2	SOIL	10/03/91	SCI		TCLP	6.000	200.00	ND	ND		ND
5-7	SOIL	10/03/91	SCI		TCLP	7.000	ND	6.00	ND		ND
710	SOIL	10/03/91	SCI		TCLP	ND	ND	ND	ND		ND

* VT DOH HEALTH ADVISORY LEVEL: FEBRUARY, 1986.

ND = Not Detected

** VT ANR GROUND WATER STANDARD: VT ANR/DEC, CHAPTER 12

GROUNDWATER PROTECTION RULE AND STRATEGY, TABLE 1

PRIMARY GROUND WATER QUALITY STANDARDS, SEPTEMBER 1988.

*** US EPA MCL: US EPA MAXIMUM CONTAMINANT LEVEL, APRIL 1991.

DWR = Dept. Water Resources

SPE = Spectrum

AQU = Aquatec

SCI = Scitest

1/05/91

Capital City Press and Vicinity
Laboratory Analytical Results - Metals
Matrix: Soil

I:\projects\1-1012-1\soils.db

ALL RESULTS REPORTED IN PPB

SAMPLE LOCATION	MATRIX	SAMPLE DATE	LAB SAMPLE ANALYTICAL		ARSENIC	BARIUM	CADMIUM	CHROMIUM	COPPER	LEAD
			LAB	NUMBER						
9/5-7	SOIL	10/03/91	SCI	TCLP	ND	ND	ND	ND		140.00
10/5-7	SOIL	10/04/91	SCI	TCLP	ND	230.00	6.00	ND		ND
11/7-9	SOIL	10/04/91	SCI	TCLP	ND	ND	ND	ND		ND
12/5-7	SOIL	10/04/91	SCI	TCLP	ND	ND	ND	ND		ND
13/5-7	SOIL	10/04/91	SCI	TCLP	ND	270.00	ND	ND		ND
14/5-7	SOIL	10/04/91	SCI	TCLP	ND	ND	ND	ND		ND
15/0-2	SOIL	10/04/91	SCI	TCLP	6.000	ND	17.00	ND		340.00
15/5	SOIL	10/04/91	SCI	TCLP	ND	ND	96.00	ND		140.00
16/0-2	SOIL	10/04/91	SCI	TCLP	ND	ND	8.00	ND		ND
-17	SOIL	10/18/91	SCI	TCLP						
-18	SOIL	10/18/91	SCI	TCLP						
-20	SOIL	10/18/91	SCI	TCLP						
-21	SOIL	10/18/91	SCI	TCLP						
-22	SOIL	10/18/91	SCI	TCLP						

* VT DOH HEALTH ADVISORY LEVEL: FEBRUARY, 1986.

ND = Not Detected

** VT ANR GROUND WATER STANDARD: VT ANR/DEC, CHAPTER 12

GROUNDWATER PROTECTION RULE AND STRATEGY, TABLE 1

PRIMARY GROUND WATER QUALITY STANDARDS, SEPTEMBER 1988.

*** US EPA MCL: US EPA MAXIMUM CONTAMINANT LEVEL, APRIL 1991.

DWR = Dept. Water Resources

SPE = Spectrum

AQU = Aquatec

SCI = Scitest

Capital City Press
Laboratory Analytical Results - Metals (cont.)
Matrix: Soil

ALL RESULTS REPORTED IN PPB

SAMPLE LOCATION	DATE	MERCURY	NICKEL	SELENIUM	SILVER	ZINC
US EPA MCL***		2.000	100.00	50.000		
VT AAR GROUND WATER STANDARD**		2.000	350.00		50.0	5000.00
VT DOH HEALTH ADVISORY LEVEL*						
CC003A SOIL	4/30/84				1900.0	
CC004B SOIL	4/30/84				1000.0	
CC005B SOIL	4/30/84				1100.0	
CC006C SOIL	4/30/84				249000.0	
CC007 SOIL	4/30/84				700.0	
CC008D SOIL	4/30/84				15400.0	
CC009D SOIL	4/30/84				16100.0	
CCP SITE D TRENCH	4/30/84				ND	
CCP SITE G SOIL	4/30/84				ND	
CCP SITE H SOIL	4/30/84				ND	
CCP SITE I SOIL	4/30/84				ND	
CC011 SOIL	5/01/84				5400.0	
CC012 SOIL	5/01/84				12400.0	
CC014 SOIL	5/01/84				3800.0	
CCP SITE A SOIL	5/01/84				ND	
CCP SITE B SOIL	5/01/84				ND	
CCP SOIL 017/018	5/08/84					
CCP JC01 SOIL	8/14/87					
CCP JC05 SOIL	8/14/87					
02/0-2	10/03/91	ND	ND	ND	ND	70.00
03/0-2	10/03/91	ND	ND	ND	ND	90.00
04/0-2	10/03/91	ND	ND	ND	ND	1030.00
05/0-2	10/03/91	ND	ND	ND	ND	100.00
05/5-7	10/03/91	ND	ND	ND	ND	80.00
06/0-2	10/03/91	ND	ND	ND	ND	1080.00
07/0-2	10/03/91	ND	90.00	ND	ND	140.00
08/0-2	10/03/91	ND	ND	ND	ND	50.00
08/5-7	10/03/91	ND	ND	ND	ND	80.00
09/10	10/03/91	ND	70.00	6.000	ND	70.00

CONTRACT CITY OF MISSOURI
Laboratory Analytical Results - Metals (cont.)

Matrix: Soil

ALL RESULTS REPORTED IN PPB

SAMPLE LOCATION	DATE	MERCURY	NICKEL	SELENIUM	SILVER	ZINC
1/5-7	10/03/91	ND	ND	8.000	ND	60.00
0/5-7	10/04/91	ND	130.00	ND	ND	130.00
1/7-9	10/04/91	ND	60.00	ND	ND	80.00
2/5-7	10/04/91	ND	ND	ND	ND	80.00
3/5-7	10/04/91	ND	ND	ND	ND	80.00
4/5-7	10/04/91	ND	100.00	ND	ND	80.00
5/0-2	10/04/91	ND	320.00	ND	40.0	24.00
6/5	10/04/91	ND	130.00	ND	ND	380.00
6/0-2	10/04/91	ND	80.00	ND	ND	60.00
7	10/18/91					
8	10/18/91					
9	10/18/91					
10	10/18/91					
11	10/18/91					
12	10/18/91					

Capital City Press and Vicinity
Laboratory Analytical Results - Metals
Matrix: Groundwater

I:\projects\1-1012-1\gwwater.db

SAMPLE LOCATION	MATRIX	SAMPLE DATE	LAB	LAB SAMPLE NUMBER	ALL RESULTS REPORTED IN PPB					
					ARSENIC	BARIUM	CADMIUM	CHROMIUM	COPPER	LEAD
J W CORRIVEAU	TAP WATER	10/09/86	DWR	25499						
KNAPP AIRPORT	TAP WATER	10/09/86	DWR	25503						
L FLUDE	TAP WATER	10/09/86	DWR	25508						
SCAN AMERICA	TAP WATER	10/09/86	DWR	25506						
V BROWN	TAP WATER	10/09/86	DWR	25498						
COLLIER	TAP WATER	10/20/86	DOH		ND				ND	ND
E J PRESCOTT	TAP WATER	10/21/86	DOH							
H L MILLER	TAP WATER	10/21/86	DOH							
CCP DRINKING WATER	TAP WATER	12/01/86	AQU							
BCBS	TAP WATER	2/11/88	DWR							
CCP	TAP WATER	2/11/88	DOH	V8800473						
J W CORRIVEAU	TAP WATER	2/11/88	DOH	V8800456						
MI INSURANCE	TAP WATER	2/11/88	DOH	V8800450						
V BROWN	TAP WATER	2/11/88	DOH	V8800457						
J W CORRIVEAU	TAP WATER	5/19/88	DOH	V8800726						
J W CORRIVEAU	TAP WATER	7/16/88	DOH	V8800953						
CCP	TAP WATER	2/06/91	DOH							
D JANAWICZ	TAP WATER	2/06/91	DOH	V91-461						
NR INSURANCE - WELL #1	TAP WATER	2/06/91	DOH	V91-457						
MI INSURANCE - WELL #2	TAP WATER	2/06/91	DOH	V91-458						
V BROWN	TAP WATER	2/06/91	DOH	V91-459						

* VT DOH HEALTH ADVISORY LEVEL: FEBRUARY 1986.

** VT AHR GROUND WATER STANDARD: VT AHR/DEC, CHAPTER 12
GROUND WATER PROTECTION RULE AND STRATEGY, TABLE 1 PRIMARY
GROUND WATER QUALITY STANDARDS, SEPTEMBER 1988.

*** US EPA MCL: US EPA MAXIMUM CONTAMINANT LEVEL, APRIL 1991.

ND = Not Detected

J = An Estimated Value

C = Result Corrected for Presence
of Compound in the Blank

SPE = Spectrum

DWR = Dept. Water Resources

AQU = Aquatec

DOH = Vermont Dept. of Health

ETL = Ellis A. Tarlton Laboratory

Capital City Press
Groundwater Analytical Results (cont.)
Matrix: Groundwater

ALL RESULTS REPORTED IN PPB

SAMPLE LOCATION	DATE	MERCURY	NICKEL	SELENIUM	SILVER	ZINC
W CORRIVEAU	10/09/86					
APP AIRPORT	10/09/86					
PLUDE	10/09/86					
AN AMERICA	10/09/86					
BROWN	10/09/86					
LLIER	10/20/86					
J PRESCOTT	10/21/86					
L MILLER	10/21/86					
P DRINKING WATER	12/01/86					
BS	2/11/88					
P	2/11/88					
W CORRIVEAU	2/11/88					
INSURANCE	2/11/88					
BROWN	2/11/88					
W CORRIVEAU	5/19/88					
W CORRIVEAU	7/16/88					
P	2/06/91					
JANAWICZ	2/06/91					
INSURANCE - WELL #1	2/06/91					
INSURANCE - WELL #2	2/06/91					
BROWN	2/06/91					

APPENDIX E

ANALYTICAL RESULTS GROUND WATER, SOIL, AND SEDIMENT SAMPLES

Collected by TRCC Personnel at Capital City Press

August 6, 1992

CLP VOLATILE ORGANIC ANALYSIS
CASE NO. 18577 SAS 7009A SDG NO. SAO269
ANALYTICAL RESULTS

Sample Location	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press			
Sample Number	GW-38-01	GW-38-02	GW-38-03	GW-38-04	GW-38-05			
Traffic Report Number	SAO269	SAO270	SAO271	SAO272	SAO273			
Remarks		Dup. of GW-38-01						
Sampling Date	8/6/92	8/6/92	8/6/92	8/6/92	8/6/92			
Analysis Date	8/7/92	8/7/92	8/8/92	8/8/92	8/8/92			
VOLATILE ORGANIC COMPOUND	ug/L	ug/L	ug/L	ug/L	ug/L			
Dichlorodifluoromethane			0.2 J	0.2 J				
Chloromethane	0.4 J	0.4 J						
Bromomethane								
Vinyl Chloride								
Chloroethane								
Methylene Chloride	0.04 J							
Acetone	500 J*	1400 J*						
Carbon Disulfide								
1,1-Dichloroethene								
2,2-Dichloropropane								
1,1-Dichloroethane								
trans-1,2-Dichloroethene								
cis-1,2-Dichloroethene								
Bromochloromethane								
Chloroform								
1,2-Dichloroethane								
2-Butanone		6 J						
1,1,1-Trichloroethane								
Carbon Tetrachloride								
1,1-Dichloropropene								
Bromodichloromethane								
1,2-Dichloropropane								
cis-1,3-Dichloropropene								
Trichloroethene			1					
Dibromochloromethane								
1,2-Dibromoethane								
1,1,2-Trichloroethane								
Benzene								
Dibromomethane								
trans-1,3-Dichloropropene								
1,3-Dichloropropane								
Bromoform								
4-Methyl-2-pentanone								

A blank space indicates the compound was not detected.

J Quantitation is approximate due to limitations identified during the quality control review.

* Value obtained through dilution.

CLP VOLATILE ORGANIC ANALYSIS
CASE NO. 18577 SAS 7009A SDG NO. SAO269
ANALYTICAL RESULTS

Sample Location	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press			
Sample Number	GW-38-01	GW-38-02	GW-38-03	GW-38-04	GW-38-05			
Traffic Report Number	SAO269	SAO270	SAO271	SAO272	SAO273			
Remarks		Dup. of GW-38-01						
Sampling Date	8/6/92	8/6/92	8/6/92	8/6/92	8/6/92			
Analysis Date	8/7/92	8/7/92	8/8/92	8/8/92	8/8/92			
VOLATILE ORGANIC COMPOUND	ug/L	ug/L	ug/L	ug/L	ug/L			
2-Hexanone								
Tetrachloroethene								
1,1,2,2-Tetrachloroethane								
Toluene								
Chlorobenzene								
1,1,1,2-Tetrachloroethane								
Ethylbenzene								
Styrene								
Xylene (Total)								
Isopropylbenzene								
Bromobenzene								
1,2,3-Trichloropropane								
n-Propylbenzene								
2-Chlorotoluene								
4-Chlorotoluene								
1,3,5-Trimethylbenzene	0.04 J							
tert-Butylbenzene								
1,2,4-Trimethylbenzene	0.05 J							
sec-Butylbenzene								
1,3-Dichlorobenzene								
1,2-Dichlorobenzene								
p-Isopropyltoluene								
n-Butylbenzene								
1,2-Dibromo-3-Chloropropane								
1,4-Dichlorobenzene	0.07 J			0.1 J				
1,2,4-Trichlorobenzene								
Naphthalene								
1,2,3-Trichlorobenzene								
Hexachlorobutadiene								
Trichlorofluoromethane								

A blank space indicates the compound was not detected.

J Quantitation is approximate due to limitations identified during the quality control review.

TABLE 2 Page 1 of 2
 CLP VOLATILE ORGANIC ANALYSIS
 CASE NO. 18577 SAS 7009A SDG NO. SAO269
 SAMPLE QUANTITATION LIMITS

Sample Location	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press			
Sample Number	GW-38-01	GW-38-02	GW-38-03	GW-38-04	GW-38-05			
Traffic Report Number	SAO269	SAO270	SAO271	SAO272	SAO273			
Remarks		Dup. of GW-38-01						
VOLATILE ORGANIC COMPOUND	ug/L	ug/L	ug/L	ug/L	ug/L			
Dichlorodifluoromethane	1	1	1	1	1			
Chloromethane	1	1	1	1	1			
Bromomethane	1	1	1	1	1			
Vinyl Chloride	1	1	1	1	1			
Chloroethane	1	1	1	1	1			
Methylene Chloride	1	1	1	1	1			
Acetone	50 *	100 *	5 R	5 R	5 R			
Carbon Disulfide	1	1	1	1	1			
1,1-Dichloroethene	1	1	1	1	1			
2,2-Dichloropropane	1	1	1	1	1			
1,1-Dichloroethane	1	1	1	1	1			
trans-1,2-Dichloroethene	1	1	1	1	1			
cis-1,2-Dichloroethene	1	1	1	1	1			
Bromochloromethane	1	1	1	1	1			
Chloroform	1	1	1	1	1			
1,2-Dichloroethane	1	1	1	1	1			
2-Butanone	5 R	5	5 R	5 R	5 R			
1,1,1-Trichloroethane	1	1	1	1	1			
Carbon Tetrachloride	1	1	1	1	1			
1,1-Dichloropropene	1	1	1	1	1			
Bromodichloromethane	1	1	1	1	1			
1,2-Dichloropropane	1	1	1	1	1			
cis-1,3-Dichloropropene	1	1	1	1	1			
Trichloroethene	1	1	1	1	1			
Dibromochloromethane	1	1	1	1	1			
1,2-Dibromoethane	1	1	1	1	1			
1,1,2-Trichloroethane	1	1	1	1	1			
Benzene	1	1	1	1	1			
Dibromomethane	1	1	1	1	1			
trans-1,3-Dichloropropene	1	1	1	1	1			
1,3-Dichloropropane	1	1	1	1	1			
Bromoform	1	1	1	1	1			
4-Methyl-2-pentanone	5	5	5 R	5	5			

R Value is rejected.

* Quantitation limit obtained through dilution.

TABLE 2 Page 2 of 2
CLP VOLATILE ORGANIC ANALYSIS
CASE NO. 18577 SAS 7009A SDG NO. SAO269
SAMPLE QUANTITATION LIMITS

Sample Location	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press			
Sample Number	GW-38-01	GW-38-02	GW-38-03	GW-38-04	GW-38-05			
Traffic Report Number	SAO269	SAO270	SAO271	SAO272	SAO273			
Remarks		Dup. of GW-38-01						
VOLATILE ORGANIC COMPOUND	ug/L	ug/L	ug/L	ug/L	ug/L			
2-Hexanone	5 R	5 R	5 R	5 R	5 R			
Tetrachloroethene	1	1	1	1	1			
1,1,2,2-Tetrachloroethane	1	1	1	1	1			
Toluene	1	1	1	1	1			
Chlorobenzene	1	1	1	1	1			
1,1,1,2-Tetrachloroethane	1	1	1	1	1			
Ethylbenzene	1	1	1	1	1			
Styrene	1	1	1	1	1			
Xylene (Total)	1	1	1	1	1			
Isopropylbenzene	1	1	1	1	1			
Bromobenzene	1	1	1	1	1			
1,2,3-Trichloropropane	1	1	1	1	1			
n-Propylbenzene	1	1	1	1	1			
2-Chlorotoluene	1	1	1	1	1			
4-Chlorotoluene	1	1	1	1	1			
1,3,5-Trimethylbenzene	1	1	1	1	1			
tert-Butylbenzene	1	1	1	1	1			
1,2,4-Trimethylbenzene	1	1	1	1	1			
sec-Butylbenzene	1	1	1	1	1			
1,3-Dichlorobenzene	1	1	1	1	1			
1,2-Dichlorobenzene	1	1	1	1	1			
p-Isopropyltoluene	1	1	1	1	1			
n-Butylbenzene	1	1	1	1	1			
1,2-Dibromo-3-Chloropropane	1 R	1 R	1 R	1 R	1 R			
1,4-Dichlorobenzene	1	1	1	1	1			
1,2,4-Trichlorobenzene	1	1	1	1	1			
Naphthalene	1	1	1	1	1			
1,2,3-Trichlorobenzene	1	1	1	1	1			
Hexachlorobutadiene	1	1	1	1	1			
Trichlorofluoromethane	1	1	1	1	1			

R Value is rejected.

CLP EXTRACTABLE ORGANIC ANALYSIS

CASE NO. 18550, SAS6702HQ SDG NO. 3194

ANALYTICAL RESULTS

Sample Location	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press			
Sample Number	GW-38-01	GW-38-02	GW-38-03	GW-38-04	GW-38-05			
Traffic Report Number	SAO274	SAO275	SAO276	SAO277	SAO278			
Remarks		Dup. of GW-38-01						
Sampling Date	8/06/92	8/06/92	8/06/92	8/06/92	8/06/92			
Extraction Date	8/10/92	8/10/92	8/10/92	8/10/92	8/10/92			
Analysis Date	8/12/92	8/12/92	8/12/92	8/12/92	8/12/92			
SEMI-VOLATILE COMPOUND	ug/L	ug/L	ug/L	ug/L	ug/L			
Phenol								
bis (2-Chloroethyl) ether								
2-Chlorophenol								
2,2'-Oxybis(1-Chloropropane)								
2-Methylphenol								
4-Methylphenol								
N-Nitroso-di-n-propylamine								
Hexachloroethane								
Nitrobenzene								
Isophorone								
2-Nitrophenol								
2,4-Dimethylphenol								
bis (2-Chloroethoxy) methane								
2,4-Dichlorophenol								
1,2,4-Trichlorobenzene								
Naphthalene								
4-Chloroaniline								
Hexachlorobutadiene								
4-Chloro-3-methylphenol								
2-Methylnaphthalene								
Hexachlorocyclopentadiene								
2,4,6-Trichlorophenol								
2,4,5-Trichlorophenol								
2-Chloronaphthalene								
2-Nitroaniline								
Dimethylphthalate								
Acenaphthylene								
2,6-Dinitrotoluene								

CLP EXTRACTABLE ORGANIC ANALYSIS
CASE NO. 18550, SAS6702HQ SDG NO. 3194
ANALYTICAL RESULTS

Sample Location	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press			
Sample Number	GW-38-01	GW-38-02	GW-38-03	GW-38-04	GW-38-05			
Traffic Report Number	SAO274	SAO275	SAO276	SAO277	SAO278			
Remarks		Dup. of GW-38-01						
SEMI-VOLATILE COMPOUND	ug/L	ug/L	ug/L	ug/L	ug/L			
3-Nitroaniline								
Acenaphthene								
2,4-Dinitrophenol								
4-Nitrophenol								
Dibenzofuran								
2,4-Dinitrotoluene								
Diethylphthalate								
4-Chlorophenyl-phenylether								
Fluorene								
4-Nitroaniline								
4,6-Dinitro-2-methylphenol								
N-Nitrosodiphenylamine								
4-Bromophenyl-phenylether								
Hexachlorobenzene								
Pentachlorophenol								
Phenanthrene								
Anthracene								
Di-n-butylphthalate								
Fluoranthene								
Pyrene								
Butylbenzylphthalate								
3,3'-Dichlorobenzidine								
Benzo(a)anthracene								
Chrysene								
bis(2-Ethylhexyl)phthalate				1 J				
Di-n-octyl phthalate								
Benzo(b)fluoranthene								
Benzo(k)fluoranthene								
Benzo(a)pyrene								
Indeno (1,2,3-cd)pyrene								
Dibenz(a,h)anthracene								
Benzo(g,h,i)perylene								

A blank space indicates the compound was not detected.

J Quantitation is approximate due to limitations identified during the quality control review.

CLP EXTRACTABLE ORGANIC ANALYSIS

CASE NO. 18550, SAS6702HQ SDG NO. 3194

SAMPLE QUANTITATION LIMITS

Sample Location	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press			
Sample Number	GW-38-01	GW-38-02	GW-38-03	GW-38-04	GW-38-05			
Traffic Report Number	SAO274	SAO275	SAO276	SAO277	SAO278			
Remarks		Dup. of GW-38-01						
SEMI-VOLATILE COMPOUND	ug/L	ug/L	ug/L	ug/L	ug/L			
Phenol	5	5	5	5	5			
bis (2-Chloroethyl) ether	5	5	5	5	5			
2-Chlorophenol	5	5	5	5	5			
2,2'-Oxybis(1-Chloropropane)	5	5	5	5	5			
2-Methylphenol	5	5	5	5	5			
4-Methylphenol	5	5	5	5	5			
N-Nitroso-di-n-propylamine	5	5	5	5	5			
Hexachloroethane	5	5	5	5	5			
Nitrobenzene	5	5	5	5	5			
Isophorone	5	5	5	5	5			
2-Nitrophenol	5	5	5	5	5			
2,4-Dimethylphenol	5	5	5	5	5			
bis (2-Chloroethoxy) methane	5	5	5	5	5			
2,4-Dichlorophenol	5	5	5	5	5			
1,2,4-Trichlorobenzene	5	5	5	5	5			
Naphthalene	5	5	5	5	5			
4-Chloroaniline	5	5	5	5	5			
Hexachlorobutadiene	5	5	5	5	5			
4-Chloro-3-methylphenol	5	5	5	5	5			
2-Methylnaphthalene	5	5	5	5	5			
Hexachlorocyclopentadiene	5	5	5	5	5			
2,4,6-Trichlorophenol	5	5	5	5	5			
2,4,5-Trichlorophenol	20	20	20	20	20			
2-Chloronaphthalene	5	5	5	5	5			
2-Nitroaniline	20	20	20	20	20			
Dimethylphthalate	5	5	5	5	5			
Acenaphthylene	5	5	5	5	5			
2,6-Dinitrotoluene	5	5	5	5	5			

CLP EXTRACTABLE ORGANIC ANALYSIS

CASE NO. 18550, SAS6702HQ SDG NO. 3194

SAMPLE QUANTITATION LIMITS

Sample Location	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press			
Sample Number	GW-38-01	GW-38-02	GW-38-03	GW-38-04	GW-38-05			
Traffic Report Number	SAO274	SAO275	SAO276	SAO277	SAO278			
Remarks		Dup. of GW-38-01						
SEMI-VOLATILE COMPOUND	ug/L	ug/L	ug/L	ug/L	ug/L			
3-Nitroaniline	20	20	20	20	20			
Acenaphthene	5	5	5	5	5			
2,4-Dinitrophenol	20	20	20	20	20			
4-Nitrophenol	20	20	20	20	20			
Dibenzofuran	5	5	5	5	5			
2,4-Dinitrotoluene	5	5	5	5	5			
Diethylphthalate	5	5	5	5	5			
4-Chlorophenyl-phenylether	5	5	5	5	5			
Fluorene	5	5	5	5	5			
4-Nitroaniline	20	20	20	20	20			
4,6-Dinitro-2-methylphenol	20	20	20	20	20			
N-Nitrosodiphenylamine	5	5	5	5	5			
4-Bromophenyl-phenylether	5	5	5	5	5			
Hexachlorobenzene	5	5	5	5	5			
Pentachlorophenol	20	20	20	20	20			
Phenanthrene	5	5	5	5	5			
Anthracene	5	5	5	5	5			
Di-n-butylphthalate	5	5	5	5	5			
Fluoranthene	5	5	5	5	5			
Pyrene	5	5	5	5	5			
Butylbenzylphthalate	5	5	5	5	5			
3,3'-Dichlorobenzidine	5	5	5	5	5			
Benzo(a)anthracene	5	5	5	5	5			
Chrysene	5	5	5	5	5			
bis(2-Ethylhexyl)phthalate	5	5	5	5	5			
Di-n-octyl phthalate	5	5	5	5	5			
Benzo(b)fluoranthene	5	5	5	5	5			
Benzo(k)fluoranthene	5	5	5	5	5			
Benzo(a)pyrene	5	5	5	5	5			
Indeno (1,2,3-cd)pyrene	5	5	5	5	5			
Dibenz(a,h)anthracene	5	5	5	5	5			
Benzo(g,h,i)perylene	5	5	5	5	5			

CLP EXTRACTABLE ORGANIC ANALYSIS
CASE NO. 18550, SAS6702HQ SDG NO. 3194
ANALYTICAL RESULTS

Sample Location	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press			
Sample Number	GW-38-01	GW-38-02	GW-38-03	GW-38-04	GW-38-05			
Traffic Report Number	SAO274	SAO275	SAO276	SAO277	SAO278			
Remarks		Dup. of GW-38-01						
Sampling Date	8/06/92	8/06/92	8/06/92	8/06/92	8/06/92			
Extraction Date	8/10/92	8/10/92	8/10/92	8/10/92	8/10/92			
Analysis Date	8/14/92	8/14/92	8/14/92	8/14/92	8/14/92			
PESTICIDE/PCB COMPOUND	ug/L	ug/L	ug/L	ug/L	ug/L			
alpha-BHC								
beta-BHC								
delta-BHC								
gamma-BHC (Lindane)								
Heptachlor								
Aldrin								
Heptachlor epoxide								
Endosulfan I								
Dieldrin								
4,4'-DDE								
Endrin								
Endosulfan II								
4,4'-DDD								
Endosulfan sulfate								
4,4'-DDT								
Methoxychlor								
Endrin ketone								
Endrin aldehyde								
alpha-Chlordane								
gamma-Chlordane								
Toxaphene								
Aroclor-1016								
Aroclor-1221								
Aroclor-1232								
Aroclor-1242								
Aroclor-1248								
Aroclor-1254								
Aroclor-1260								

A blank space indicates the compound was not detected.

TABLE 6 Page 1 of 1
 CLP EXTRACTABLE ORGANIC ANALYSIS
 CASE NO. 18550, SAS6702HQ SDG NO. 3194
 SAMPLE QUANTITATION LIMITS

Sample Location	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press			
Sample Number	GW-38-01	GW-38-02	GW-38-03	GW-38-04	GW-38-05			
Traffic Report Number	SAO274	SAO275	SAO276	SAO277	SAO278			
Remarks		Dup. of GW-38-01						
PESTICIDE/PCB COMPOUND	ug/L	ug/L	ug/L	ug/L	ug/L			
alpha-BHC	0.010	0.010	0.010	0.010	0.010			
beta-BHC	0.010	0.010	0.010	0.010	0.010			
delta-BHC	0.010	0.010	0.010	0.010	0.010			
gamma-BHC (Lindane)	0.010	0.010	0.010	0.010	0.010			
Heptachlor	0.010	0.010	0.010	0.010	0.010			
Aldrin	0.010	0.010	0.010	0.010	0.010			
Heptachlor epoxide	0.010	0.010	0.010	0.010	0.010			
Endosulfan I	0.010	0.010	0.010	0.010	0.010			
Dieldrin	0.020	0.020	0.020	0.020	0.020			
4,4'-DDE	0.020	0.020	0.020	0.020	0.020			
Endrin	0.020	0.020	0.020	0.020	0.020			
Endosulfan II	0.020	0.020	0.020	0.020	0.020			
4,4'-DDD	0.020	0.020	0.020	0.020	0.020			
Endosulfan sulfate	0.020	0.020	0.020	0.020	0.020			
4,4'-DDT	0.020	0.020	0.020	0.020	0.020			
Methoxychlor	0.100	0.100	0.100	0.100	0.100			
Endrin ketone	0.020	0.020	0.020	0.020	0.020			
Endrin aldehyde	0.020	0.020	0.020	0.020	0.020			
alpha-Chlordane	0.010	0.010	0.010	0.010	0.010			
gamma-Chlordane	0.010	0.010	0.010	0.010	0.010			
Toxaphene	1.00	1.00	1.00	1.00	1.00			
Aroclor-1016	0.200	0.200	0.200	0.200	0.200			
Aroclor-1221	0.200	0.200	0.200	0.200	0.200			
Aroclor-1232	0.400	0.400	0.400	0.400	0.400			
Aroclor-1242	0.200	0.200	0.200	0.200	0.200			
Aroclor-1248	0.200	0.200	0.200	0.200	0.200			
Aroclor-1254	0.200	0.200	0.200	0.200	0.200			
Aroclor-1260	0.200	0.200	0.200	0.200	0.200			

CLP EXTRACTABLE ORGANIC ANALYSIS
CASE NO. 18552 SDG NO's ADC09, ADC14
ANALYTICAL RESULTS

Sample Location	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press		
Sample Number	SS-38-06	SS-38-07	SS-38-08	SS-38-09	SD-38-10	RB-38-11		
Traffic Report Number	ADC09	ADC10	ADC11	ADC12	ADC13	ADC14		
Remarks	10X DIL.	Dup. of SS-38-06				Rinsate		
Sampling Date	8/6/92	8/6/92	8/6/92	8/6/92	8/6/92	8/6/92		
Extraction Date	8/11/92	8/11/92	8/11/92	8/11/92	8/11/92	8/11/92		
Analysis Date	8/17/92	8/17/92	8/19/92	8/19/92	8/17/92	8/12/92		
PESTICIDE/PCB COMPOUND	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/L		
alpha-BHC	0.25 J	0.22 J						
beta-BHC								
delta-BHC			0.13 J					
gamma-BHC (Lindane)	1.9 J	2.3 J						
Heptachlor	1.0 J	1.4 J						
Aldrin	1.1 J	1.3 J			0.12 J			
Heptachlor epoxide	0.24 J	0.10 J						
Endosulfan I								
Dieldrin	0.25 J	1.9 J						
4,4'-DDE	7.8 J	4.5 J			0.18 J			
Endrin	4.7 J	5.8 J	0.30 J		0.22 J			
Endosulfan II		0.59 J						
4,4'-DDD				0.43 J	2.5 J			
Endosulfan sulfate	6.3 J	6.7 J	0.58 J	2.7 J				
4,4'-DDT	1.6 J	1.6 J						
Methoxychlor	130	170						
Endrin ketone		4.6 J			2.5 J			
Endrin aldehyde			1.2 J					
alpha-Chlordane					0.23 J			
gamma-Chlordane								
Toxaphene								
Aroclor-1016								
Aroclor-1221								
Aroclor-1232								
Aroclor-1242								
Aroclor-1248								
Aroclor-1254								
Aroclor-1260								

A blank space indicates the compound was not detected.

J Quantitation is approximate due to limitations identified during the quality control review.

CLP INORGANIC ANALYSIS
CASE NO. 18552 SDG NO. MAAR32
ANALYTICAL RESULTS

Sample Location	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press		
Sample Number	GW-38-01	GW-38-02	GW-38-03	GW-38-04	GW-38-05	RB-38-11		
Traffic Report Number	MAAR32	MAAR33	MAAR34	MAAR35	MAAR36	MAAR42		
Remarks		Duplicate of GW-38-01				Rinsate Blank		
Sampling Date	8/6/92	8/6/92	8/6/92	8/6/92	8/6/92	8/6/92		
Inorganic Elements	CRDL (ug/L)	ug/L	ug/L	ug/L	ug/L	ug/L		
Aluminum	P 200					226		
Antimony	P 60							
Arsenic	F 10							
Barium	P 200					2.2		
Beryllium	P 5							
Cadmium	P 5							
Calcium	P 5000	64600	63800	108000	104000	325		
Chromium	P 10							
Cobalt	P 50							
Copper	P 25				43.4			
Iron	P 100	320	272			31.5		
Lead	F 3					6.3		
Magnesium	P 5000	10400	10200	6830	7940	37.8		
Manganese	P 15	453	453	149		8.5		
Mercury	V 0.2	0.44 J		0.23 J				
Nickel	P 40							
Potassium	P 5000	912	888	2780	2190			
Selenium	F 5							
Silver	P 10							
Sodium	P 5000	23100	23100	216000	51100	175000	333	
Thallium	F 10							
Vanadium	P 50							
Zinc	P 20	106 J	171 J		20.1 J			
Cyanide	C 10							

Analytical Method

F Furnace
P ICP/Flame AA
V Cold Vapor
C Colorimetric

A blank space indicates the element was not detected.

J Quantitation is approximate due to limitations identified in the quality control review.

Sample Detection Limits for the elements listed above are reported in Table 2.

CLP INORGANIC ANALYSIS
CASE NO. 18552 SDG NO. MAAR32
SAMPLE DETECTION LIMITS

Sample Location	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press		
Sample Number	GW-38-01	GW-38-02	GW-38-03	GW-38-04	GW-38-05	RB-38-11		
Traffic Report Number	MAAR32	MAAR33	MAAR34	MAAR35	MAAR36	MAAR42		
Remarks		Duplicate of GW-38-01				Rinsate Blank		
Sampling Date	8/6/92	8/6/92	8/6/92	8/6/92	8/6/92	8/6/92		
Percent Solids	0.0	0.0	0.0	0.0	0.0	0.0		
Inorganic Elements	IDL (ug/L)	ug/L	ug/L	ug/L	ug/L	ug/L		
Aluminum	P 17.3	24.10 UJ	30.70 UJ	17.30	41.20	27.60 UJ	17.30	
Antimony	P 16.5	16.50	16.50	16.50	16.50	16.50	16.50	
Arsenic	F 2.6	2.60	2.60	2.60	2.60	2.60	2.60	
Barium	P 1.0	4.50	4.50	4.70	1.80 UJ	1.00	1.00	
Beryllium	P 0.4	0.40	0.40	0.40	0.40	0.40	0.40	
Cadmium	P 1.4	1.40	1.40	1.40	1.40	1.40	1.40	
Calcium	P 14.3	14.30	14.30	14.30	14.30	226.00	14.30	
Chromium	P 3.7	3.70	3.70	3.70	3.70	3.70	3.70	
Cobalt	P 2.3	2.30	2.30	2.30	2.30	2.30	2.30	
Copper	P 2.4	6.00	6.30	13.30	2.40	6.60	2.40	
Iron	P	16.30	16.30	50.80	40.50	16.20	16.30	
Lead	F 1.0	6.40	5.30	7.30	7.90	7.20	1.00	
Magnesium	P 16.6	16.60	16.60	16.60	16.60	5000.00 UJ	16.60	
Manganese	P 1.3	1.30	1.30	1.30	2.00 UJ	1.30	1.30	
Mercury	V 0.2	0.20	0.20 UJ	0.20	0.20 UJ	0.20 UJ	0.20	
Nickel	P 6.0	6.00	6.00	6.00	6.00	6.00	6.00	
Potassium	P 77.1	77.10	77.10	77.10	77.10	430.00	77.10	
Selenium	F 3.7	3.70	3.70	3.70	3.70	3.70	3.70	
Silver	P 2.3	2.30	2.30	2.30	2.30	2.30	2.30	
Sodium	P 29.7	29.70	29.70	29.70	29.70	29.70	29.70	
Thallium	F 0.9	0.90 R	4.50 R	4.50 R	4.50 R	4.50 R	0.90	
Vanadium	P 3.3	3.30	3.30	3.30	3.30	3.30	3.30	
Zinc	P 10.1	10.10	10.10	10.10	10.10	10.10	10.10	
Cyanide	C 10.0	10.00	10.00	10.00	10.00	10.00	10.00	

Analytical Method

F Furnace AA

P ICP/Flame AA

V Cold Vapor

C Colorimetric

Sample's wet weight (gms) digested

for Hg analysis

for ICP analysis

for furnace AA analysis

for Cyanide analysis

Volumes used preparing samples for analysis

for Hg analysis

100 mls

for ICP/AA analysis

200 mls

for Cyanide analysis

50 mls

UJ Value is undetected and the quantitation is approximate due to limitations identified in the quality control review.

R Value is rejected.

CLP VOLATILE ORGANIC ANALYSIS
CASE NO. 18552 SDG NO's ADC09, ADC14
ANALYTICAL RESULTS

Sample Location	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press		
Sample Number	SS-38-06	SS-38-07	SS-38-08	SS-38-09	SD-38-10	RB-38-11		
Traffic Report Number	ADC09	ADC10	ADC11	ADC12	ADC13	ADC14		
Remarks		Dup. of SS-38-06				Rinsate		
Sampling Date	8/6/92	8/6/92	8/6/92	8/6/92	8/6/92	8/6/92		
Analysis Date	8/11/92	8/11/92	8/11/92	8/11/92	8/12/92	8/10/92		
VOLATILE ORGANIC COMPOUND	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/L		
Chloromethane								
Bromomethane								
Vinyl Chloride								
Chloroethane								
Methylene Chloride						2 J		
Acetone								
Carbon Disulfide								
1,1-Dichloroethene								
1,1-Dichloroethane								
1,2-Dichloroethene (Total)								
Chloroform						11		
1,2-Dichloroethane								
2-Butanone								
1,1,1-Trichloroethane								
Carbon Tetrachloride								
Bromodichloromethane								
1,2-Dichloropropane								
cis-1,3-Dichloropropene								
Trichloroethene								
Dibromochloromethane								
1,1,2-Trichloroethane								
Benzene								
trans-1,3-Dichloropropene								
Bromoform								
4-Methyl-2-pentanone								
2-Hexanone								
Tetrachloroethene								
1,1,2,2-Tetrachloroethane								
Toluene								
Chlorobenzene								
Ethylbenzene								
Styrene								
Xylene (Total)								

A blank space indicates the compound was not detected.

J Quantitation is approximate due to limitations identified during the quality control review.

CLP VOLATILE ORGANIC ANALYSIS

CASE NO. 18552 SDG NO's ADC09, ADC14

SAMPLE QUANTITATION LIMITS

Sample Location	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press		
Sample Number	SS-38-06	SS-38-07	SS-38-08	SS-38-09	SD-38-10	RB-38-11		
Traffic Report Number	ADC09	ADC10	ADC11	ADC12	ADC13	ADC14		
Remarks		Dup. of SS-38-06				Rinsate		
Percent Solids	72	69	78	79	54	0		
VOLATILE ORGANIC COMPOUND	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/L		
Chloromethane	14	14	13	13	19	10 UJ		
Bromomethane	14	14	13	13	19	10		
Vinyl Chloride	14	14	13	13	19	10		
Chloroethane	14	14	13	13	19	10		
Methylene Chloride	16	14	26	22	19	10		
Acetone	14	14	13	13	25	10 UJ		
Carbon Disulfide	14	14	13	13	19	10		
1,1-Dichloroethene	14	14	13	13	19	10		
1,1-Dichloroethane	14	14	13	13	19	10		
1,2-Dichloroethene (Total)	14	14	13	13	19	10		
Chloroform	14	14	13	13	19	10		
1,2-Dichloroethane	14	14	13	13	19	10		
2-Butanone	14 UJ	14 UJ	13 UJ	13 UJ	19 UJ	10 UJ		
1,1,1-Trichloroethane	14	14	13	13	19	10		
Carbon Tetrachloride	14	14	13	13	19	10		
Bromodichloromethane	14	14	13	13	19	10		
1,2-Dichloropropane	14	14	13	13	19	10		
cis-1,3-Dichloropropene	14	14	13	13	19	10		
Trichloroethene	14	14	13	13	19	10		
Dibromochloromethane	14	14	13	13	19	10		
1,1,2-Trichloroethane	14	14	13	13	19	10		
Benzene	14	14	13	13	19	10		
trans-1,3-Dichloropropene	14	14	13	13	19	10		
Bromoform	14	14	13	13	19	10		
4-Methyl-2-pentanone	14	14	13	13	19	10 UJ		
2-Hexanone	14	14	13	13	19	10 UJ		
Tetrachloroethene	14	14	13	13	19	10		
1,1,2,2-Tetrachloroethane	14	14	13	13	19	10		
Toluene	14	14	13	13	19	10		
Chlorobenzene	14	14	13	13	19	10		
Ethylbenzene	14	14	13	13	19	10		
Styrene	14	14	13	13	19	10		
Xylene (Total)	14	14	13	13	19	10		

UJ Quantitation limit is approximate due to limitations identified during the quality control review.

CLP EXTRACTABLE ORGANIC ANALYSIS

CASE NO. 18552 SDG NO's ADC09, ADC14

ANALYTICAL RESULTS

Sample Location	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press		
Sample Number	SS-38-06	SS-38-07	SS-38-08	SS-38-09	SD-38-10	RB-38-11		
Traffic Report Number	ADC09	ADC10	ADC11	ADC12	ADC13	ADC14		
Remarks	10X DIL.	Dup. of SS-38-06				Rinsate		
Sampling Date	8/6/92	8/6/92	8/6/92	8/6/92	8/6/92	8/6/92		
Extraction Date	8/11/92	8/11/92	8/11/92	8/11/92	8/11/92	8/11/92		
Analysis Date	8/13/92	8/13/92	8/13/92	8/13/92	8/13/92	8/12/92		
SEMI-VOLATILE								
COMPOUND	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/L		
Phenol								
bis (2-Chloroethyl) ether								
2-Chlorophenol								
1,3-Dichlorobenzene								
1,4-Dichlorobenzene								
1,2-Dichlorobenzene								
2,2'-Oxybis(1-Chloropropane)								
2-Methylphenol								
4-Methylphenol								
N-Nitroso-di-n-propylamine								
Hexachloroethane								
Nitrobenzene								
Isophorone								
2-Nitrophenol								
2,4-Dimethylphenol								
bis (2-Chloroethoxy) methane								
2,4-Dichlorophenol								
1,2,4-Trichlorobenzene								
Naphthalene								
4-Chloroaniline								
Hexachlorobutadiene								
4-Chloro-3-methylphenol								
2-Methylnaphthalene								
Hexachlorocyclopentadiene								
2,4,6-Trichlorophenol								
2,4,5-Trichlorophenol								
2-Chloronaphthalene								
2-Nitroaniline								
Dimethylphthalate								
Acenaphthylene								
2,6-Dinitrotoluene								

CLP EXTRACTABLE ORGANIC ANALYSIS
CASE NO. 18552 SDG NO's ADC09, ADC14
ANALYTICAL RESULTS

Sample Location	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press		
Sample Number	SS-38-06	SS-38-07	SS-38-08	SS-38-09	SD-38-10	RB-38-11		
Traffic Report Number	ADC09	ADC10	ADC11	ADC12	ADC13	ADC14		
Remarks	10X DIL.	Dup. of SS-38-06				Rinsate		
SEMI-VOLATILE COMPOUND	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/L		
3-Nitroaniline								
Acenaphthene	780 J	740 J						
2,4-Dinitrophenol								
4-Nitrophenol						3 J		
Dibenzofuran	480 J	490 J						
2,4-Dinitrotoluene								
Diethylphthalate								
4-Chlorophenyl-phenylether								
Fluorene	1100 J	1000 J						
1-Nitroaniline								
4,6-Dinitro-2-methylphenol								
N-Nitrosodiphenylamine								
4-Bromophenyl-phenylether								
Hexachlorobenzene								
Pentachlorophenol			54 J					
Phenanthrene	16000	16000	66 J	160 J				
Anthracene	1800 J	2100 J						
Carbazole	3800 J	4000 J						
Di-n-butylphthalate			56 J	48 J	99 J			
Fluoranthene	37000	36000	130 J	330 J				
Pyrene	22000	23000	120 J	340 J				
Butylbenzylphthalate								
3,3'-Dichlorobenzidine								
Benzo(a)anthracene	11000	13000	66 J	160 J				
Chrysene	14000	15000	68 J	160 J				
bis(2-Ethylhexyl)phthalate								
Di-n-octyl phthalate								
Benzo(b)fluoranthene	30000 J	31000 J	200 J	370 J				
Benzo(k)fluoranthene	30000 J	31000 J	200 J	370 J				
Benzo(a)pyrene	12000	13000		100 J				
Indeno (1,2,3-cd)pyrene	9500	9700	72 J	180 J				
Dibenz(a,h)anthracene	1800 J	2000 J		61 J				
Benzo(g,h,i)perylene	8900	8800	97 J	130 J				

A blank space indicates the compound was not detected.

J Quantitation is approximate due to limitations identified during the quality control review.

CLP EXTRACTABLE ORGANIC ANALYSIS

CASE NO. 18552 SDG NO's ADC09, ADC14

SAMPLE QUANTITATION LIMITS

Sample Location	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press		
Sample Number	SS-38-06	SS-38-07	SS-38-08	SS-38-09	SD-38-10	RB-38-11		
Traffic Report Number	ADC09	ADC10	ADC11	ADC12	ADC13	ADC14		
Remarks	10X DIL.	Dup. of SS-38-06				Rinsate		
Percent Solids	72	69	78	79	54	0		
SEMI-VOLATILE								
COMPOUND	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/L		
Phenol	4600	4800	420	420	610	10		
bis (2-Chloroethyl) ether	4600	4800	420	420	610	10		
2-Chlorophenol	4600	4800	420	420	610	10		
1,3-Dichlorobenzene	4600	4800	420	420	610	10		
1,4-Dichlorobenzene	4600	4800	420	420	610	10		
1,2-Dichlorobenzene	4600	4800	420	420	610	10		
2,2'-Oxybis(1-Chloropropane)	4600	4800	420	420	610	10		
2-Methylphenol	4600	4800	420	420	610	10		
4-Methylphenol	4600	4800	420	420	610	10		
N-Nitroso-di-n-propylamine	4600	4800	420	420	610	10		
Hexachloroethane	4600	4800	420	420	610	10		
Nitrobenzene	4600	4800	420	420	610	10		
sophorone	4600	4800	420	420	610	10		
2-Nitrophenol	4600	4800	420	420	610	10		
2,4-Dimethylphenol	4600	4800	420	420	610	10		
ois (2-Chloroethoxy) methane	4600	4800	420	420	610	10		
2,4-Dichlorophenol	4600	4800	420	420	610	10		
1,2,4-Trichlorobenzene	4600	4800	420	420	610	10		
Naphthalene	4600	4800	420	420	610	10		
4-Chloroaniline	4600	4800	420	420	610	10		
Hexachlorobutadiene	4600	4800	420	420	610	10		
4-Chloro-3-methylphenol	4600	4800	420	420	610	10		
2-Methylnaphthalene	4600	4800	420	420	610	10		
Hexachlorocyclopentadiene	4600	4800	420	420	610	10		
2,4,6-Trichlorophenol	4600	4800	420	420	610	10		
2,4,5-Trichlorophenol	11000	12000	1000	1000	1500	25		
2-Chloronaphthalene	4600	4800	420	420	610	10		
2-Nitroaniline	11000	12000	1000	1000	1500	25		
Dimethylphthalate	4600	4800	420	420	610	10		
Acenaphthylene	4600	4800	420	420	610	10		
2,6-Dinitrotoluene	4600	4800	420	420	610	10		

CLP EXTRACTABLE ORGANIC ANALYSIS

CASE NO. 18552 SDG NO's ADC09, ADC14

SAMPLE QUANTITATION LIMITS

Sample Location	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press		
Sample Number	SS-38-06	SS-38-07	SS-38-08	SS-38-09	SD-38-10	RB-38-11		
Traffic Report Number	ADC09	ADC10	ADC11	ADC12	ADC13	ADC14		
Remarks	10X DIL.	Dup. of SS-38-06				Rinsate		
Percent Solids	72	69	78	79	54	0		
SEMI-VOLATILE COMPOUND	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/L		
1-Nitroaniline	11000	12000	1000	1000	1500	25		
Acenaphthene	4600	4800	420	420	610	10		
2,4-Dinitrophenol	11000	12000	1000	1000	1500	25		
1-Nitrophenol	4600	4800	420	420	610	10		
Dibenzofuran	4600	4800	420	420	610	10		
2,4-Dinitrotoluene	4600	4800	420	420	610	10		
Diethylphthalate	4600	4800	420	420	610	10		
1-Chlorophenyl-phenylether	4600	4800	420	420	610	10		
Fluorene	4600	4800	420	420	610	10		
4-Nitroaniline	11000 UJ	12000 UJ	1000	1000 UJ	1500 UJ	25		
2,6-Dinitro-2-methylphenol	11000	12000	1000	1000	1500	25		
4-Nitrosodiphenylamine	4600	4800	420	420	610	10		
4-Bromophenyl-phenylether	4600	4800	420	420	610	10		
Hexachlorobenzene	4600	4800	420	420	610	10		
Pentachlorophenol	11000	12000	1000	1000	1500	25		
Phenanthrene	4600	4800	420	420	610	10		
Anthracene	4600	4800	420	420	610	10		
Carbazole	4600	4800	420	420	610	10		
Di-n-butylphthalate	4600	4800	420	420	610	10		
Fluoranthene	4600	4800	420	420	610	10		
Pyrene	4600	4800	420	420	610	10		
Butylbenzylphthalate	4600	4800	420	420	610	10		
2,3'-Dichlorobenzidine	4600	4800	420 UJ	420	610	10		
Benzo(a)anthracene	4600	4800	420	420	610	10		
Chrysene	4600	4800	420	420	610	10		
Bis(2-Ethylhexyl)phthalate	4600	4800	420	420	610	10 UJ		
Di-n-octyl phthalate	4600	4800	420	420	610	10 UJ		
Benzo(b)fluoranthene	4600	4800	420	420	610	10		
Benzo(k)fluoranthene	4600	4800	420	420	610	10		
Benzo(a)pyrene	4600	4800	420	420	610	10		
Indeno (1,2,3-cd)pyrene	4600	4800	420	420	610	10		
Dibenz(a,h)anthracene	4600	4800	420	420	610	10		
Benzo(g,h,i)perylene	4600	4800	420	420	610	10		

UJ Quantitation limit is approximate due to limitations identified during the quality control review.

CLP EXTRACTABLE ORGANIC ANALYSIS
CASE NO. 18552 SDG NO's ADC09, ADC14
ANALYTICAL RESULTS

Sample Location	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press		
Sample Number	SS-38-06	SS-38-07	SS-38-08	SS-38-09	SD-38-10	RB-38-11		
Traffic Report Number	ADC09	ADC10	ADC11	ADC12	ADC13	ADC14		
Remarks	10X DIL.	Dup. of SS-38-06				Rinsate		
Sampling Date	8/6/92	8/6/92	8/6/92	8/6/92	8/6/92	8/6/92		
Extraction Date	8/11/92	8/11/92	8/11/92	8/11/92	8/11/92	8/11/92		
Analysis Date	8/17/92	8/17/92	8/19/92	8/19/92	8/17/92	8/12/92		
PESTICIDE/PCB COMPOUND	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/L		
alpha-BHC	0.25 J	0.22 J						
beta-BHC								
delta-BHC			0.13 J					
gamma-BHC (Lindane)	1.9 J	2.3 J						
Heptachlor	1.0 J	1.4 J						
Aldrin	1.1 J	1.3 J			0.12 J			
Heptachlor epoxide	0.24 J	0.10 J						
Endosulfan I								
Dieldrin	0.25 J	1.9 J						
4,4'-DDE	7.8 J	4.5 J			0.18 J			
Endrin	4.7 J	5.8 J	0.30 J		0.22 J			
Endosulfan II		0.59 J						
4,4'-DDD				0.43 J	2.5 J			
Endosulfan sulfate	6.3 J	6.7 J	0.58 J	2.7 J				
4,4'-DDT	1.6 J	1.6 J						
Methoxychlor	130	170						
Endrin ketone		4.6 J			2.5 J			
Endrin aldehyde			1.2 J					
alpha-Chlordane					0.23 J			
gamma-Chlordane								
Toxaphene								
Aroclor-1016								
Aroclor-1221								
Aroclor-1232								
Aroclor-1242								
Aroclor-1248								
Aroclor-1254								
Aroclor-1260								

A blank space indicates the compound was not detected.

J Quantitation is approximate due to limitations identified during the quality control review.

CLP EXTRACTABLE ORGANIC ANALYSIS

CASE NO. 18552 SDG NO's ADC09, ADC14

SAMPLE QUANTITATION LIMITS

Sample Location	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press		
Sample Number	SS-38-06	SS-38-07	SS-38-08	SS-38-09	SD-38-10	RB-38-11		
Traffic Report Number	ADC09	ADC10	ADC11	ADC12	ADC13	ADC14		
Remarks		Dup. of SS-38-06				Rinsate		
Percent Solids	72	69	78	79	54	0		
PESTICIDE/PCB								
COMPOUND	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/L		
alpha-BHC	2.4	2.5	2.2	2.2	3.1	0.050		
beta-BHC	2.4	2.5	2.2	2.2	3.1	0.050		
delta-BHC	2.4	2.5	2.2	2.2	3.1	0.050		
gamma-BHC (Lindane)	2.4	2.5	2.2	2.2	3.1	0.050		
Heptachlor	2.4	2.5	2.2	2.2	3.1	0.050		
Aldrin	2.4	2.5	2.2	2.2	3.1	0.050		
Heptachlor epoxide	2.4 UJ	2.5 UJ	2.2	2.2	3.1	0.050		
Endosulfan I	2.4	2.5	2.2	2.2	3.1	0.050		
Dieldrin	4.6 UJ	4.8 UJ	4.2	4.2	6.1	0.10		
4,4'-DDE	4.6 UJ	4.8 UJ	4.2	4.2	6.1	0.10		
Endrin	4.6	4.8	4.2	4.2	6.1	0.10		
Endosulfan II	4.6	4.8	4.2	4.2	6.1	0.10		
4,4'-DDD	4.6	4.8	4.2	4.2	6.1	0.10		
Endosulfan sulfate	4.6	4.8	4.2	4.2	6.1	0.10		
4,4'-DDT	4.6	4.8	4.2	4.2	6.1	0.10		
Methoxychlor	24.0	25.0	22.0	22.0	31.0	0.50		
Endrin ketone	4.6 UJ	4.8	4.2	4.2	6.1	0.10		
Endrin aldehyde	4.6	4.8	4.2	4.2	6.1	0.10		
alpha-Chlordane	2.4	2.5	2.2	2.2	3.1	0.050		
gamma-Chlordane	2.4	2.5	2.2	2.2	3.1	0.050		
Toxaphene	240	250	220	220	310	5.0		
Aroclor-1016	46	48	42	42	61	1.0		
Aroclor-1221	93	97	86	85	120	2.0		
Aroclor-1232	46	48	42	42	61	1.0		
Aroclor-1242	46	48	42	42	61	1.0		
Aroclor-1248	46	48	42	42	61	1.0		
Aroclor-1254	46	48	42	42	61	1.0		
Aroclor-1260	46	48	42	42	61	1.0		

UJ Quantitation limit is approximate due to limitations identified during the quality control review.

CLP INORGANIC ANALYSIS
CASE NO. 18552 SDG NO. MAAR37
ANALYTICAL RESULTS

Sample Location	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press			
Sample Number	SS-38-06	SS-38-07	SS-38-08	SS-38-09	SD-38-10			
Traffic Report Number	MAAR37	MAAR38	MAAR39	MAAR40	MAAR41			
Remarks								
Sampling Date	8/6/92	8/6/92	8/6/92	8/6/92	8/6/92			
inorganic Elements	CRDL (ug/L)	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg		
Aluminum	P 200	15100	12500	10800	10500	5810		
Antimony	P 60							
Arsenic	F 10	4.7 J	6.3 J	6.9 J	5.0 J	2.0 J		
Barium	P 200	117	88.4	44.3	41.9	19.8		
Beryllium	P 5	0.31						
Cadmium	P 5							
Calcium	P 5000	3790	4350	1430	1750	2370		
Chromium	P 10	32.4	27.8	16.1	15.2	14.3		
Cobalt	P 50	14.6	12.6	9.4	9.6	6.0		
Copper	P 25	46.1	36.2	14.3	17.2	7.2		
Iron	P 100	29900	25700	20400	20800	12500		
Lead	F 3	88.3	87.0	17.1	21.6	70.0 J		
Magnesium	P 5000	7470	6560	3040	3380	2150		
Manganese	P 15	734	584	675	649	235		
Mercury	V 0.2	0.11 J	0.09 J	0.11 J	0.17 J	0.08 J		
Nickel	P 40	25.0	24.6	17.8	20.4	11.0		
Potassium	P 5000	5510	4040	769	555	237		
Selenium	F 5					1.8 J		
Silver	P 10	7.8	7.6	2.4	1.3	21.5		
Sodium	P 5000					54.2		
Thallium	F 10	0.48	0.48			7.5		
Vanadium	P 50	46.6	38.5	18.8	18.7	12.0		
Zinc	P 20	487 J	381 J	57.0 J	54.5	38.2 J		
Cyanide	C 10		0.75			7.8		

Analytical Method
= Furnace
P ICP/Flame AA
V Cold Vapor
C Colorimetric

A blank space indicates the element was not detected.

J Quantitation is approximate due to limitations identified in the quality control review.

Sample Detection Limits for the elements listed above are reported in Table 2.

CLP INORGANIC ANALYSIS
CASE NO. 18552' SDG NO. MAAR37
SAMPLE DETECTION LIMITS

Sample Location	Capital City Press	Capital City Press	Capital City Press	Capital City Press	Capital City Press			
Sample Number	SS-38-06	SS-38-07	SS-38-08	SS-38-09	SD-38-10			
Traffic Report Number	MAAR37	MAAR38	MAAR39	MAAR40	MAAR41			
Remarks								
Sampling Date	8/6/92	8/6/92	8/6/92	8/6/92	8/6/92			
Percent Solids	69.4	71.3	81.3	81.1	58.4			
Inorganic Elements	IDL (ug/L)	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg		
Aluminum	P 23.9	6.26	6.57	5.71	5.61	7.72		
Antimony	P 16.3	4.90 UJ	4.48 UJ	3.89 UJ	3.83 UJ	7.40 UJ		
Arsenic	F 2.4	0.65	0.65	0.55	0.57	0.80		
Barium	P 4.6	1.21	1.27	1.10	1.08	1.49		
Beryllium	P 0.7	0.18	0.19	0.17	0.16	0.23		
Cadmium	P 1.5	0.39	0.41	0.36	0.35	0.48		
Calcium	P 15.5	4.06	4.26	3.70	3.64	5.01		
Chromium	P 4.9	1.28	1.35	1.17	1.15	1.58		
Cobalt	P 3.5	0.92	0.96	0.84	0.82	1.13		
Copper	P 3.8	1.00	1.05	0.91	0.89	12.00		
Iron	P 7.6	1.99	2.09	1.82	1.78	2.46		
Lead	F 2.2	0.60	0.59	0.50	0.52	10.20		
Magnesium	P 40.1	10.51	11.03	9.58	9.42	12.96		
Manganese	P 4.4	1.15	1.21	1.05	1.03	1.42		
Mercury	V 0.1	0.06	0.07	0.05	0.06	0.08		
Nickel	P 3.9	1.02	1.07	0.93	0.92	1.26		
Potassium	P 265.5	69.56	73.01	63.41	62.36	85.78		
Selenium	F 3.6	0.98 UJ	0.97 UJ	0.82 UJ	0.85 UJ	1.20		
Silver	P 4.8	1.26	1.32	1.15	1.13	1.55		
Sodium	P 31.3	215.00	189.00	39.40	48.30	64.30		
Thallium	F 1.6	0.43	0.43	0.36	0.38	0.53		
Vanadium	P 2.4	0.63	0.66	0.57	0.56	0.78		
Zinc	P 2.9	0.76	0.80	0.69	0.68	0.94		
Cyanide	C 10.0	0.72	0.69	0.60	0.59	0.81		

Analytical Method

F Furnace AA P ICP/Flame AA V Cold Vapor C Colorimetric

Sample's wet weight (gms) digested

for Hg analysis	0.24	0.21	0.23	0.20	0.22			
for ICP analysis	1.10	1.02	1.03	1.05	1.06			
for furnace AA analysis	1.06	1.04	1.08	1.04	1.03			
for Cyanide analysis	1.00	1.01	1.02	1.05	1.06			

Volumes used preparing samples for analysis

for Hg analysis	100 mls
for ICP/AA analysis	200 mls
for Cyanide analysis	50 mls

UJ Value is undetected and the quantitation is approximate due to
limitations identified in the quality control review.